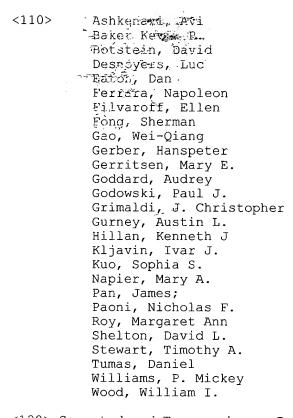
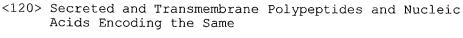


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Pro Asn Val Ser Glu Lys Ile Leu Ile Asp Ile Ile Gly Val Asp Phe Ala Phe Ala Glu Leu Cys Val Val Pro Leu Arg Ile Phe Ser 375 Phe Phe Pro Val Pro Val Thr Val Arg Ala His Leu Thr Gly Trp 380 385 Leu Met Thr Leu Lys Lys Thr Phe Val Leu Ala Pro Ser Ser Val 405 Leu Arg Ile Ile Val Leu Ile Ala Ser Leu Val Val Leu Pro Tyr 415 Leu Gly Val His Gly Ala Thr Leu Gly Val Gly Ser Leu Leu Ala 425 430 435 Gly Phe Val Gly Glu Ser Thr Met Val Ala Ile Ala Ala Cys Tyr Val Tyr Arg Lys Gln Lys Lys Met Glu Asn Glu Ser Ala Thr 460

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<212> PRT

<213> Homo sapiens

<400> 19

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Leu Phe Leu Gly Val Leu Val Ser Ile Ile Met Leu Ser Pro Gly 50 55 60

Val Glu Ser Gln Leu Tyr Lys Leu Pro Trp Val Cys Glu Glu Gly Ala Gly Ile Pro Thr Val Leu Gln Gly His Ile Asp Cys Gly Ser Leu Leu Gly Tyr Arg Ala Val Tyr Arg Met Cys Phe Ala Thr Ala Ala Phe Phe Phe Phe Phe Thr Leu Leu Met Leu Cys Val Ser 110 120 115 Ser Ser Arg Asp Pro Arg Ala Ala Ile Gln Asn Gly Phe Trp Phe 130 Phe Lys Phe Leu Ile Leu Val Gly Leu Thr Val Gly Ala Phe Tyr 140 Ile Pro Asp Gly Ser Phe Thr Asn Ile Trp Phe Tyr Phe Gly Val Val Gly Ser Phe Leu Phe Ile Leu Ile Gln Leu Val Leu Leu Ile Asp Phe Ala His Ser Trp Asn Gln Arg Trp Leu Gly Lys Ala Glu Glu Cys Asp Ser Arg Ala Trp Tyr Ala Gly Leu Phe Phe Thr Leu Leu Phe Tyr Leu Leu Ser Ile Ala Ala Val Ala Leu Met Phe 215 Met Tyr Tyr Thr Glu Pro Ser Gly Cys His Glu Gly Lys Val Phe Ile Ser Leu Asn Leu Thr Phe Cys Val Cys Val Ser Ile Ala Ala Val Leu Pro Lys Val Gln Asp Ala Gln Pro Asn Ser Gly Leu Leu Gln Ala Ser Val Ile Thr Leu Tyr Thr Met Phe Val Thr Trp Ser Ala Leu Ser Ser Ile Pro Glu Gln Lys Cys Asn Pro His Leu Pro Thr Gln Leu Gly Asn Glu Thr Val Val Ala Gly Pro Glu Gly Tyr 315 Glu Thr Gln Trp Trp Asp Ala Pro Ser Ile Val Gly Leu Ile Ile Phe Leu Leu Cys Thr Leu Phe Ile Ser Leu Arg Ser Ser Asp His Arg Gln Val Asn Ser Leu Met Gln Thr Glu Glu Cys Pro Pro Met

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Gly Arg Ala Phe	Asp Asn G	Glu Gln Asp	Gly Val Th	r Tyr Ser Tyr 390							
Ser Phe Phe His	Phe Cys I 395	Leu Val Leu	Ala Ser Let 400	His Val Met 405							
Met Thr Leu Thr	Asn Trp T 410	Tyr Lys Pro	Gly Glu Th: 415	r Arg Lys Met 420							
Ile Ser Thr Trp	Thr Ala V 425	Val Trp Val	Lys Ile Cys 430	s Ala Ser Trp 435							
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<211> 285

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275

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280

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<sup>&</sup>lt;212> DNA

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<sup>&</sup>lt;400> 29

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<sup>&</sup>lt;212> PRT

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<sup>&</sup>lt;400> 36

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Leu Asn Leu Leu Tyr Thr Leu Val Ser Leu Leu Leu Ile Gly Ile 20 25 30

Ala Ala Trp Gly Ile Gly Phe Gly Leu Ile Ser Ser Leu Arg Val 35 40 45

Val Gly Val Val Ile Ala Val Gly Ile Phe Leu Phe Leu Ile Ala 50 55 60

Leu Val Gly Leu Ile Gly Ala Val Lys His His Gln Val Leu Leu 65 70 75

Phe Phe Tyr Met Ile Ile Leu Leu Leu Val Phe Ile Val Gln Phe 80 85 90

Ser Val Ser Cys Ala Cys Leu Ala Leu Asn Gln Glu Gln Gly
95 100 105

Gln Leu Leu Glu Val Gly Trp Asn Asn Thr Ala Ser Ala Arg Asn 110 115 120

Asp Ile Gln Arg Asn Leu Asn Cys Cys Gly Phe Arg Ser Val Asn 125 130 135

Pro Asn Asp Thr Cys Leu Ala Ser Cys Val Lys Ser Asp His Ser 140 145 150

Cys Ser Pro Cys Ala Pro Ile Ile Gly Glu Tyr Ala Gly Glu Val 155 160 165

Leu Arg Phe Val Gly Gly Ile Gly Leu Phe Phe Ser Phe Thr Glu 170 175 180

Ile Leu Gly Val Trp Leu Thr Tyr Arg Tyr Arg Asn Gln Lys Asp 185 190 195

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<223> unknown base

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Glu Thr Leu Gln Cys Glu Gly Pro Val Cys Thr Glu Glu Ser Ser 35 40 45

Cys His Thr Glu Asp Asp Leu Thr Asp Ala Arg Glu Ala Gly Phe 50 55 60

Gln Val Lys Ala Tyr Thr Phe Ser Glu Pro Phe His Leu Ile Val 65 70 75

Ser Tyr Asp Trp Leu Ile Leu Gln Gly Pro Ala Lys Pro Val Phe 80 85 90

Glu Gly Asp Leu Leu Val Leu Arg Cys Gln Ala Trp Gln Asp Trp
95 100 105

Pro Leu Thr Gln Val Thr Phe Tyr Arg Asp Gly Ser Ala Leu Gly

Pro Pro Gly Pro Asn Arg Glu Phe Ser Ile Thr Val Val Gln Lys 125 130 135

Ala Asp Ser Gly His Tyr His Cys Ser Gly Ile Phe Gln Ser Pro 140 145 150

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Glu	Pro	Gln	Ala	Gly 185	Ser	Pro	Met	Thr	Leu 190	Ser	Cys	Gln	Thr	Lys 195
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Lys	Asp	Gly	Arg	Ile 215	Val	Gln	Ser	Arg	Gly 220	Leu	Ser	Ser	Glu	Phe 225
Gln	Ile	Pro	Thr	Ala 230	Ser	Glu	Asp	His	Ser 235	Gly	Ser	Tyr	Trp	Cys 240
Glu	Ala	Ala	Thr	Glu 245	Asp	Asn	Gln	Val	Trp 250	Lys	Gln	Ser	Pro	Gln 255
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Thr	Leu	Asn	Pro	Ala 275	Pro	Gln	Lys	Ser	Ala 280	Ala	Pro	Gly	Thr	Ala 285
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Gly Pro Trp Lys Gly Asp Val Asn Leu Pro Cys Thr Tyr Asp Pro 35 40 45

Leu Gln Gly Tyr Thr Gln Val Leu Val Lys Trp Leu Val Gln Arg
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Gly Ser Asp Pro Val Thr Ile Phe Leu Arg Asp Ser Ser Gly Asp
65 70 75

His Ile Gln Gln Ala Lys Tyr Gln Gly Arg Leu His Val Ser His 80 85 90

Lys Val Pro Gly Asp Val Ser Leu Gln Leu Ser Thr Leu Glu Met 95 100 105

Asp Asp Arg Ser His Tyr Thr Cys Glu Val Thr Trp Gln Thr Pro 110 115 120

Asp Gly Asn Gln Val Val Arg Asp Lys Ile Thr Glu Leu Arg Val 125 130 135

Gln Lys Leu Ser Val Ser Lys Pro Thr Val Thr Thr Gly Ser Gly
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Tyr Gly Phe Thr Val Pro Gln Gly Met Arg Ile Ser Leu Gln Cys 155 160 165

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Val Thr Leu Pro Cys His His Gln Leu Gly Leu Pro Glu Lys Asp
35 40 45

Thr Leu Asp Ile Glu Trp Leu Leu Thr Asp Asn Glu Gly Asn Gln
50 55 60

Lys Val Val Ile Thr Tyr Ser Ser Arg His Val Tyr Asn Asn Leu 65 70 75

Thr Glu Glu Gln Lys Gly Arg Val Ala Phe Ala Ser Asn Phe Leu 80 85 90

Ala Gly Asp Ala Ser Leu Gln Ile Glu Pro Leu Lys Pro Ser Asp 95 100 105

Glu Gly Arg Tyr Thr Cys Lys Val Lys Asn Ser Gly Arg Tyr Val 110 115 120

Trp Ser His Val Ile Leu Lys Val Leu Val Arg Pro Ser Lys Pro 125 130 135

Lys Cys Glu Leu Glu Gly Glu Leu Thr Glu Gly Ser Asp Leu Thr
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Leu Gln Cys Glu Ser Ser Ser Gly Thr Glu Pro Ile Val Tyr Tyr 155 160 165

Trp Gln Arg Ile Arg Glu Lys Glu Gly Glu Asp Glu Arg Leu Pro 170 175 180

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Gln	Ala	Tyr	Ser	Leu 335	Val	Gly	Pro	Glu	Val 340	Arg	Gly	Ser	Glu	Pro 345
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<211> 655

<212> PRT

<213> Homo sapiens

<400> 64

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Val	Leu	Val	Val	Ile 365	Val	Val	Cys	Ser	Ile 370	Arg	Lys	Ser	Ser	Arg 375
Thr	Leu	Lys	Lys	Gly 380	Pro	Arg	Gln	Asp	Pro 385	Ser	Ala	Ile	Val	Glu 390
Lys	Ala	Gly	Leu	Lys 395	Lys	Ser	Met	Thr	Pro 400	Thr	Gln	Asn	Arg	Glu 405
Lys	Trp	Ile	Tyr	Tyr 410	Cys	Asn	Gly	His	Gly 415	Ile	Asp	Ile	Leu	Lys 420
Leu	Val	Ala	Ala	Gln 425	Val	Gly	Ser	Gln	Trp 430	Lys	Asp	Ile	Tyr	Gln 435
Phe	Leu	Суз	Asn	Ala 440	Ser	Glu	Arg	Glu	Val 445	Ala	Ala	Phe	Ser	Asn 450
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Trp	Thr	Ile	Arg	Gly 470	Pro	Glu	Ala	Ser	Leu 475	Ala	Gln	Leu	Ile	Ser 480
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Gly	Leu	Met	Glu	Asp 500	Thr	Thr	Gln	Leu	Glu 505	Thr	Asp	Lys	Leu	Ala 510
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Pro	Asn	Ala	Lys	Leu 530	Glu	Asn	Ser	Ala	Leu 535	Leu	Thr	Val	Glu	Pro 540
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Leu	Arg	Gln	Val	Arg 590	Leu	Asp	Pro	Cys	Asp 595	Leu	Gln	Pro	Ile	Phe 600
Asp	Asp	Met	Leu	His 605	Phe	Leu	Asn	Pro	Glu 610	Glu	Leu	Arg	Val	Ile 615

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<211> 453

<212> PRT

<213> Homo sapiens

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Pro Asp Ala Asp Ala Val Ala Ala Gln Ile Leu Ser Leu Leu Pro
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Leu Lys Phe Phe Pro Ile Ile Val Ile Gly Ile Ile Ala Leu Ile 50 55 60

Leu Ala Leu Ala Ile Gly Leu Gly Ile His Phe Asp Cys Ser Gly
65 70 75

Lys Tyr Arg Cys Arg Ser Ser Phe Lys Cys Ile Glu Leu Ile Ala 80 85 90

Arg Cys Asp Gly Val Ser Asp Cys Lys Asp Gly Glu Asp Glu Tyr
95 100 105

Arg Cys Val Arg Val Gly Gly Gln Asn Ala Val Leu Gln Val Phe

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Val	Seŗ	Ser	Asp	Asn 155	Leu	Arg	Val	Ser	Ser 160	Leu	Glu	Gly	Gln	Phe 165
Arg	Glu	Glu	Phe	Val 170	Ser	Ile	Asp	His	Leu 175	Leu	Pro	Asp	Asp	Lys 180
Val	Thr	Ala	Leu	His 185	His	Ser	Val	Tyr	Val 190	Arg	Glu	Gly	Суз	Ala 195
Ser	Gly	His	Val	Val 200	Thr	Leu	Gln	Суѕ	Thr 205	Ala	Cys	Gly	His	Arg 210
Arg	Gly	Tyr	Ser	Ser 215	Arg	Ile	Val	Gly	Gly 220	Asn	Met	Ser	Leu	Leu 225
Ser	Gln	Trp	Pro	Trp 230	Gln	Ala	Ser	Leu	Gln 235	Phe	Gln	Gly	Tyr	His 240
Leu	Cys	Gly	Gly	Ser 245	Val	Ile	Thr	Pro	Leu 250	Trp	Ile	Ile	Thr	Ala 255
Ala	His	Cys	Val	Tyr 260	Asp	Leu	Tyr	Leu	Pro 265	Lys	Ser	Trp	Thr	Ile 270
Gln	Val	Gly	Leu	Val 275	Ser	Leu	Leu	Asp	Asn 280	Pro	Ala	Pro	Ser	His 285
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Leu	Gly	Asn	Asp	Ile 305	Ala	Leu	Met	Lys	Leu 310	Ala	Gly	Pro	Leu	Thr 315
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Thr	Glu	Asp	Gly	Gly 350	Asp <sub>.</sub>	Ala	Ser	Pro	Val 355	Leu	Asn	His	Ala	Ala 360
Val	Pro	Leu	Ile	Ser 365	Asn	Lys	Ile	Cys	Asn 370	His	Arg	Asp	Val	Tyr 375
Gly	Gly	Ile	Ile	Ser 380	Pro	Ser	Met	Leu	Cys 385	Ala	Gly	Tyr	Leu	Thr 390
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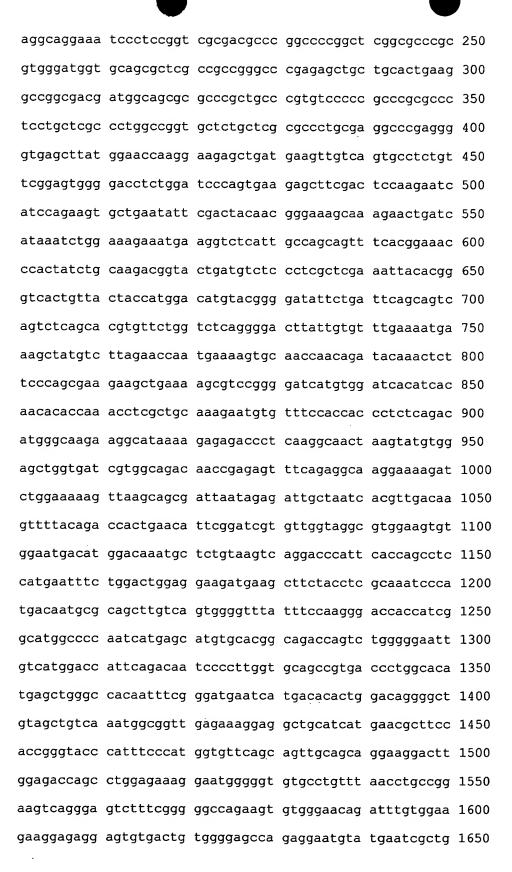
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<211> 735

<212> PRT

<213> Homo sapiens

<400> 74

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Val Ser Leu Trp Asn Gln Gly Arg Ala Asp Glu Val Val Ser Ala 35 40 45

Ser Val Arg Ser Gly Asp Leu Trp Ile Pro Val Lys Ser Phe Asp 50 55 60

Ser Lys Asn His Pro Glu Val Leu Asn Ile Arg Leu Gln Arg Glu
65 70 75

Ser Lys Glu Leu Ile Ile Asn Leu Glu Arg Asn Glu Gly Leu Ile 80 85 90

Ala Ser Ser Phe Thr Glu Thr His Tyr Leu Gln Asp Gly Thr Asp 95 100 105

Val Ser Leu Ala Arg Asn Tyr Thr Gly His Cys Tyr Tyr His Gly
110 115 120

His Val Arg Gly Tyr Ser Asp Ser Ala Val Ser Leu Ser Thr Cys 125 130 135

Ser Gly Leu Arg Gly Leu Ile Val Phe Glu Asn Glu Ser Tyr Val 140 145 150

Leu Glu Pro Met Lys Ser Ala Thr Asn Arg Tyr Lys Leu Phe Pro 155 160 165

Ala Lys Lys Leu Lys Ser Val Arg Gly Ser Cys Gly Ser His His
170 175 180

Asn Thr Pro Asn Leu Ala Ala Lys Asn Val Phe Pro Pro Pro Ser 185 190 195

Gln Thr Trp Ala Arg Arg His Lys Arg Glu Thr Leu Lys Ala Thr 200 205 210

Lys Tyr Val Glu Leu Val Ile Val Ala Asp Asn Arg Glu Phe Gln Arg Gln Gly Lys Asp Leu Glu Lys Val Lys Gln Arg Leu Ile Glu 230 240 Ile Ala Asn His Val Asp Lys Phe Tyr Arg Pro Leu Asn Ile Arg Ile Val Leu Val Gly Val Glu Val Trp Asn Asp Met Asp Lys Cys 265 270 Ser Val Ser Gln Asp Pro Phe Thr Ser Leu His Glu Phe Leu Asp 280 Trp Arg Lys Met Lys Leu Leu Pro Arg Lys Ser His Asp Asn Ala 290 295 Gln Leu Val Ser Gly Val Tyr Phe Gln Gly Thr Thr Ile Gly Met Ala Pro Ile Met Ser Met Cys Thr Ala Asp Gln Ser Gly Gly Ile 320 Val Met Asp His Ser Asp Asn Pro Leu Gly Ala Ala Val Thr Leu Ala His Glu Leu Gly His Asn Phe Gly Met Asn His Asp Thr Leu 350 Asp Arg Gly Cys Ser Cys Gln Met Ala Val Glu Lys Gly Gly Cys Ile Met Asn Ala Ser Thr Gly Tyr Pro Phe Pro Met Val Phe Ser Ser Cys Ser Arg Lys Asp Leu Glu Thr Ser Leu Glu Lys Gly Met Gly Val Cys Leu Phe Asn Leu Pro Glu Val Arg Glu Ser Phe Gly Gly Gln Lys Cys Gly Asn Arg Phe Val Glu Glu Glu Glu Glu Cys 435 Asp Cys Gly Glu Pro Glu Glu Cys Met Asn Arg Cys Cys Asn Ala Thr Thr Cys Thr Leu Lys Pro Asp Ala Val Cys Ala His Gly Leu 465 Cys Cys Glu Asp Cys Gln Leu Lys Pro Ala Gly Thr Ala Cys Arg Asp Ser Ser Asn Ser Cys Asp Leu Pro Glu Phe Cys Thr Gly Ala 495 Ser Pro His Cys Pro Ala Asn Val Tyr Leu His Asp Gly His Ser

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His	Glu	Gln	Gln	Cys 530	Val	Thr	Leu	Trp	Gly 535	Pro	Gly	Ala	Lys	Pro 540
Ala	Pro	Gly	Ile	Cys 545	Phe	Glu	Arg	Val	Asn 550	Ser	Ala	Gly	Asp	Pro 555
Tyr	Gly	Asn	Cys	Gly 560	Lys	Val	Ser	Lys	Ser 565	Ser	Phe	Ala	Lys	Cys 570
Glu	Met	Arg	Asp	Ala 575	Lys	Суѕ	Gly	Lys	Ile 580	Gln	Суѕ	Gln	Gly	Gly 585
Ala	Ser	Arg	Pro	Val 590	Ile	Gly	Thr	Asn	Ala 595	Val	Ser	Ile	Glu	Thr 600
Asn	Ile	Pro	Leu	Gln 605	Gln	Gly	Gly	Arg	Ile 610	Leu	Cys	Arg	Gly	Thr 615
His	Val	Tyr	Leu	Gly 620	Asp	Asp	Met	Pro	Asp 625	Pro	Gly	Leu	Val	Leu 630
Ala	Gly	Thr	Lys	Cys 635	Ala	Asp	Gly	Lys	Ile 640	Cys	Leu	Asn	Arg	Gln 645
Cys	Gln	Asn	Ile	Ser 650	Val	Phe	Gly	Val	His 655	Glu	Cys	Ala	Met	Gln 660
Cys	His	Gly	Arg	Gly 665	Val	Cys	Asn	Asn	Arg 670	Lys	Asn	Cys	His	Cys 675
Glu	Ala	His	Trp	Ala 680	Pro	Pro	Phe	Cys	Asp 685	Lys	Phe	Gly	Phe	Gly 690
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Glu	Ala	Ala	Glu	Ser 710	Asn	Arg	Glu	Arg	Gly 715	Gln	Gly	Gln	Glu	Pro 720
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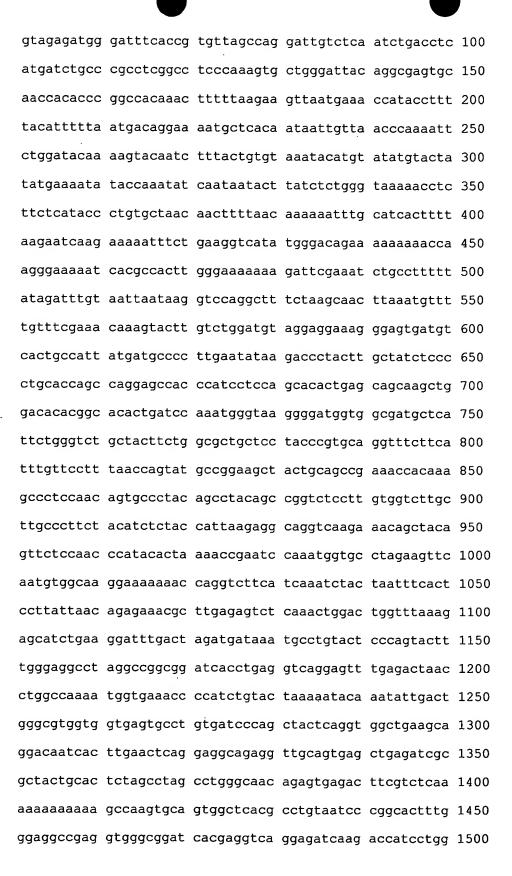
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- <213> Homo sapiens
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Thr Ser Met Pro Glu Ala Thr Ala Ala Glu Thr Thr Lys Pro Ser 35 40 45

Asn Ser Ala Leu Gln Pro Thr Ala Gly Leu Leu Val Val Leu Leu 50 55 60

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Gly Gly Arg Trp Gly Ala Arg Ala Gln Glu Ala Ala Ala Ala Ala 35 40 45

Ala Asp Gly Pro Pro Ala Ala Asp Gly Glu Asp Gly Gln Asp Pro
50 55 60

His Ser Lys His Leu Tyr Thr Ala Asp Met Phe Thr His Gly Ile
65 70 75

Gln Ser Ala Ala His Phe Val Met Phe Phe Ala Pro Trp Cys Gly 80 85 90

His Cys Gln Arg Leu Gln Pro Thr Trp Asn Asp Leu Gly Asp Lys 95 100 105

Tyr Asn Ser Met Glu Asp Ala Lys Val Tyr Val Ala Lys Val Asp 110 115 120

Cys Thr Ala His Ser Asp Val Cys Ser Ala Gln Gly Val Arg Gly 125 130 135

Tyr Pro Thr Leu Lys Leu Phe Lys Pro Gly Gln Glu Ala Val Lys
140 145 150

Tyr Gln Gly Pro Arg Asp Phe Gln Thr Leu Glu Asn Trp Met Leu 155 160 165

Gln Thr Leu Asn Glu Glu Pro Val Thr Pro Glu Pro Glu Val Glu 170 175 180

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Ala	Ser	Asn	Phe	Glu 200	Leu	His	Val	Ala	Gln 205	Gly	Asp	His	Phe	Ile 210
Lys	Phe	Phe	Ala	Pro 215	Trp	Cys	Gly	His	Cys 220	Lys	Ala	Leu	Ala	Pro 225
Thr	Trp	Glu	Gln	Leu 230	Ala	Leu	Gly	Leu	Glu 235	His	Ser	Glu	Thr	Val 240
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Ala	Thr	Glu	Thr	Val 305	Thr	Pro	Ser	Glu	Ala 310	Pro	Val	Leu	Ala	Ala 315
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Ile	Ala	Glu	Val	Asp 380	Cys	Thr	Ala	Glu	Arg 385		Ile		Ser	Lys 390
Tyr	Ser	Val	Arg	Gly 395	Tyr	Pro	Thr	Leu	Leu 400	Leu	Phe	Arg	Gly	Gly 405
Lys	Lys	Val <sup>·</sup>	Ser	Glu 410	His	Ser	Gly	Gly	Arg 415	Asp	Leu	Asp	Ser	Leu 420
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Asp Ser Arg Pro Thr Ala Glu Val Cys Ala Thr His Thr Ile Ser 35 40 45

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50 55 60

Glu Gly Lys His Gly Lys Val Gly Arg Met Gly Pro Lys Gly Ile 65 70 75

Lys Gly Glu Leu Gly Asp Met Gly Asp Gln Gly Asn Ile Gly Lys

				80					85					90
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Leu	Gly	Ile	Pro	Gly 110	Glu	Lys	Gly	Lys	Ala 115	Gly	Thr	Val	Cys	Asp 120
Cys	Gly	Arg	Tyr	Arg 125	Lys	Phe	Val	Gly	Gln 130	Leu	Asp	Ile	Ser	Ile 135
Ala	Arg	Leu	Lys	Thr 140	Ser	Met	Lys	Phe	Val 145	Lys	Asn	Val	Ile	Ala 150
Gly	Ile	Arg	Glu	Thr 155	Glu	Glu	Lys	Phe	Tyr 160	Tyr	Ile	Val	Gln	Glu 165
Glu	Lys	Asn	Tyr	Arg 170	Glu	Ser	Leu	Thr	His 175	Суѕ	Arg	Ile	Arg	Gly 180
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Ala	Asp	Tyr	Val	Ala 200	Lys	Ser	Gly	Phe	Phe 205	Arg	Val	Phe	Ile	Gly 210
Val	Asn	Asp	Leu	Glu 215	Arg	Glu	Gly	Gln	Tyr 220	Met	Ser	Thr	Asp	Asn 225
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Arg	Trp	Asn	Asp	Thr 260	Glu	Cys	His	Leu	Thr 265	Met	Tyr	Phe	Val	Cys 270
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Gly Ser Met Ala Ala Leu Leu Leu Leu Pro Leu Leu Leu Leu 50 55 60

Pro Leu Leu Leu Lys Leu His Leu Trp Pro Gln Leu Arg Trp
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Leu Pro Ala Asp Leu Ala Phe Ala Val Arg Ala Leu Cys Cys Lys 80 85 90

Arg Ala Leu Arg Ala Arg Ala Leu Ala Ala Ala Ala Ala Asp Pro 95 100 105

Glu Gly Pro Glu Gly Gly Cys Ser Leu Ala Trp Arg Leu Ala Glu 110 115 120

Leu Ala Gln Gln Arg Ala Ala His Thr Phe Leu Ile His Gly Ser 125 130 135

Arg Arg Phe Ser Tyr Ser Glu Ala Glu Arg Glu Ser Asn Arg Ala 140 145 150

Ala Arg Ala Phe Leu Arg Ala Leu Gly Trp Asp Trp Gly Pro Asp 155 160 165

Gly Gly Asp Ser Gly Glu Gly Ser Ala Gly Glu Gly Glu Arg Ala 170 175 180

Ala Pro Gly Ala Gly Asp Ala Ala Gly Ser Gly Ala Glu Phe 185 190 195

Ala Gly Gly Asp Gly Ala Ala Arg Gly Gly Gly Ala Ala Ala Pro 200 205 210

Leu Ser Pro Gly Ala Thr Val Ala Leu Leu Pro Ala Gly Pro Glu Phe Leu Trp Leu Trp Phe Gly Leu Ala Lys Ala Gly Leu Arg 230 Thr Ala Phe Val Pro Thr Ala Leu Arg Arg Gly Pro Leu Leu His Cys Leu Arg Ser Cys Gly Ala Arg Ala Leu Val Leu Ala Pro Glu Phe Leu Glu Ser Leu Glu Pro Asp Leu Pro Ala Leu Arg Ala Met Gly Leu His Leu Trp Ala Ala Gly Pro Gly Thr His Pro Ala Gly Ile Ser Asp Leu Leu Ala Glu Val Ser Ala Glu Val Asp Gly Pro Val Pro Gly Tyr Leu Ser Ser Pro Gln Ser Ile Thr Asp Thr Cys 320 330 Leu Tyr Ile Phe Thr Ser Gly Thr Thr Gly Leu Pro Lys Ala Ala 335 Arg Ile Ser His Leu Lys Ile Leu Gln Cys Gln Gly Phe Tyr Gln 350 Leu Cys Gly Val His Gln Glu Asp Val Ile Tyr Leu Ala Leu Pro Leu Tyr His Met Ser Gly Ser Leu Leu Gly Ile Val Gly Cys Met 380 Gly Ile Gly Ala Thr Val Val Leu Lys Ser Lys Phe Ser Ala Gly 395 Gln Phe Trp Glu Asp Cys Gln Gln His Arg Val Thr Val Phe Gln Tyr Ile Gly Glu Leu Cys Arg Tyr Leu Val Asn Gln Pro Pro Ser Lys Ala Glu Arg Gly His Lys Val Arg Leu Ala Val Gly Ser Gly Leu Arg Pro Asp Thr Trp Glu Arg Phe Val Arg Arg Phe Gly Pro Leu Gln Val Leu Glu Thr Tyr Gly Leu Thr Glu Gly Asn Val Ala Thr Ile Asn Tyr Thr Gly Gln Arg Gly Ala Val Gly Arg Ala Ser Trp Leu Tyr Lys His Ile Phe Pro Phe Ser Leu Ile Arg Tyr Asp

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Gln	Gln	Ser	Pro	Phe 545	Leu	Gly	Tyr	Ala	Gly 550	Gly	Pro	Glu	Leu	Ala 555
Gln	Gly	Lys	Leu	Leu 560	Lys	Asp	Val	Phe	Arg 565	Pro	Gly	Asp	Val	Phe 570
Phe	Asn	Thr	Gly	Asp 575	Leu	Leu	Val	Cys	Asp 580	Asp	Gln	Gly	Phe	Leu 585
Arg	Phe	His	Asp	Arg 590	Thr	Gly	Asp	Thr	Phe 595	Arg	Trp	Lys	Gly	Glu 600
Asn	Val	Ala	Thr	Thr 605	Glu	Val	Ala	Glu	Val 610	Phe	Glu	Ala	Leu	Asp 615
Phe	Leu	Gln	Glu	Val 620	Asn	Val	Tyr	Gly	Val 625	Thr	Val	Pro	Gly	His 630
Glu	Gly	Arg	Ala	Gly 635	Met	Ala	Ala	Leu	Val 640	Leu	Arg	Pro	Pro	His 645
Ala	Leu	Asp	Leu	Met 650	Gln	Leu	Tyr	Thr	His 655	Val	Ser	Glu	Asn	Leu 660
Pro	Pro	Tyr	Ala	Arg 665	Pro	Arg	Phe	Leu	Arg 670	Leu	Gln	Glu	Ser	Leu 675
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Glu	Gly	Phe	Asp	Pro 695	Ser	Thr	Leu	Ser	Asp 700	Pro	Leu	Tyr	Val	Leu 705
Asp	Gln	Ala	Val	Gly 710	Ala	Tyr	Leu	Pro	Leu 715	Thr	Thr	Ala	Arg	Tyr 720
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Gly Glu Val Arg Gln Ala Tyr Gly Ala Lys Gly Phe Ser Leu Ala 35 40 45

Asp Ile Pro Tyr Gln Glu Ile Ala Gly Glu His Leu Arg Ile Cys
50 55 60

Pro Gln Glu Tyr Thr Cys Cys Thr Thr Glu Met Glu Asp Lys Leu 65 70 75

Ser	Gln	Gln	Ser	Lys 80	Leu	Glu	Phe	Glu	Asn 85	Leu	Val	Glu	Glu	Thr 90
Ser	His	Phe	Val	Arg 95	Thr	Thr	Phe	Val	Ser 100	Arg	His	Lys	Lys	Phe 105
Asp	Glu	Phe	Phe	Arg 110	Glu	Leu	Leu	Glu	Asn 115	Ala	Glu	Lys	Ser	Leu 120
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Ser	Glu	Val	Phe	Gln 140	Asp	Leu	Phe	Thr	Glu 145	Leu	Lys	Arg	Tyr	Tyr 150
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Thr	Val	Gly	Arg	Glu 230	Val	Ala	Asn	Arg	Val 235	Ser	Lys	Val	Ser	Pro 240
Thr	Pro	Gly	Cys	Ile 245	Arg	Ala	Leu	Met	Lys 250	Met	Leu	Tyr	Суз	Pro 255
Tyr	Суѕ	Arg	Gly	Leu 260	Pro	Thr	Val	Arg	Pro 265	Cys	Asn	Asn	Tyr	Cys 270
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Thr	Glu	Trp	Asn	Leu 290	Phe	Ile	Asp	Ala	Met 295	Leu	Leu	Val	Ala	Glu 300
Arg	Leu	Glu	Gly	Pro 305	Phe	Asn	Ile <sup>°</sup>	Glu	Ser 310	Val	Met	Asp	Pro	Ile 315
Asp	Val	Lys	Ile	Ser 320	Glu	Ala	Ile	Met	Asn 325	Met	Gln	Glu	Asn	Ser 330
Met	Gln	Val	Ser	Ala 335	Lys	Val	Phe	Gln	Gly 340	Cys	Gly	Gln	Pro	Lys 345
Pro	Ala	Pro	Ala	Leu 350	Arg	Ser	Ala	Arg	Ser 355	Ala	Pro	Glu	Asn	Phe 360
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Lys Leu Lys Leu	Ser Lys Ly 395	ys Val Trp	Ser Ala Leu 400	Pro Tyr Thr 405								
Ile Cys Lys Asp	Glu Ser Va 410	al Thr Ala	Gly Thr Ser 415	Asn Glu Glu 420								
Glu Cys Trp Asn	Gly His Se	er Lys Ala	Arg Tyr Leu 430	Pro Glu Ile 435								
Met Asn Asp Gly	Leu Thr As	sn Gln Ile	Asn Asn Pro 445	Glu Val Asp 450								
Val Asp Ile Thr	Arg Pro As 455	sp Thr Phe	Ile Arg Gln 460	Gln Ile Met 465								
Ala Leu Arg Val	Met Thr As	sn Lys Leu	Lys Asn Ala 475	Tyr Asn Gly 480								
Asn Asp Val Asn	Phe Gln As	sp Thr Ser	Asp Glu Ser 490	Ser Gly Ser 495								
Gly Ser Gly Ser	Gly Cys Me 500	et Asp Asp	Val Cys Pro 505	Thr Glu Phe 510								
Glu Phe Val Thr	Thr Glu Al 515	la Pro Ala	Val Asp Pro 520	Asp Arg Arg 525								
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35 40 45

Trp Gly Gln Ala Leu Glu Glu Glu Glu Glu Gly Ala Leu Leu Ala 50 55 60

Gln Ala Gly Glu Lys Leu Glu Pro Ser Thr Thr Ser Thr Ser Gln
65 70 75

Pro His Leu Ile Phe Ile Leu Ala Asp Asp Gln Gly Phe Arg Asp 80 85 90

Val Gly Tyr His Gly Ser Glu Ile Lys Thr Pro Thr Leu Asp Lys 95 100 105

Leu Ala Ala Glu Gly Val Lys Leu Glu Asn Tyr Tyr Val Gln Pro

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Asn	Cys	Leu	Pro	Leu 155	Asp	Asn	Ala	Thr	Leu 160	Pro	Gln	Lys	Leu	Lys 165
Glu	Val	Gly	Tyr	Ser 170	Thr	His	Met	Val	Gly 175	Lys	Trp	His	Leu	Gly 180
Phe	Asn	Arg	Lys	Glu 185	Cys	Met	Pro	Thr	Arg 190	Arg	Gly	Phe	Asp	Thr 195
Phe	Phe	Gly	Ser	Leu 200	Leu	Gly	Ser	Gly	Asp 205	Tyr	Tyr	Thr	His	Tyr 210
Lys	Cys	Asp	Ser	Pro 215	Gly	Met	Cys	Gly	Tyr 220	Asp	Leu	Tyr	Glu	Asn 225
Asp	Asn	Ala	Ala	Trp 230	Asp	Tyr	Asp	Asn	Gly 235	Ile	Tyr	Ser	Thr	Gln 240
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Thr	Lys	Pro	Ile	Phe 260	Leu	Tyr	Thr	Ala	Tyr 265	Gln	Ala	Val	His	Ser 270
Pro	Leu	Gln	Ala	Pro 275	Gly	Arg	Tyr	Phe	Glu 280	His	Tyr	Arg	Ser	Ile 285
Ile	Asn	Ile	Asn	Arg 290	Arg	Arg	Tyr	Ala	Ala 295	Met	Leu	Ser	Суз	Leu 300
Asp	Glu	Ala	Ile	Asn 305	Asn	Val	Thr	Leu	Ala 310	Leu	Lys	Thr	Tyr	Gly 315
Phe	Tyr	Asn	Asn	Ser 320	Ile	Ile	Ile	Tyr	Ser 325	Ser	Asp	Asn	Gly	Gly 330
Gln	Pro	Thr	Ala	Gly 335	Gly	Ser	Asn	Trp	Pro 340	Leu	Arg	Gly	Ser	Lys 345
Gly	Thr	Tyr	Trp	Glu 350	Gly	Gly	Ile	Arg	Ala 355	Val	Gly	Phe	Val	His 360
Ser	Pro	Leu	Leu	Lys 365	Asn	Lys	Gly	Thr	Val 370	Cys	Lys	Glu	Leu	Val 375
His	Ile	Thr	Asp	Trp 380	Tyr	Pro	Thr	Leu	Ile 385	Ser	Leu	Ala	Glu	Gly 390
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<210> 121

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<213> Artificial Sequence

<220>

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<211> 50

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<213> Artificial Sequence

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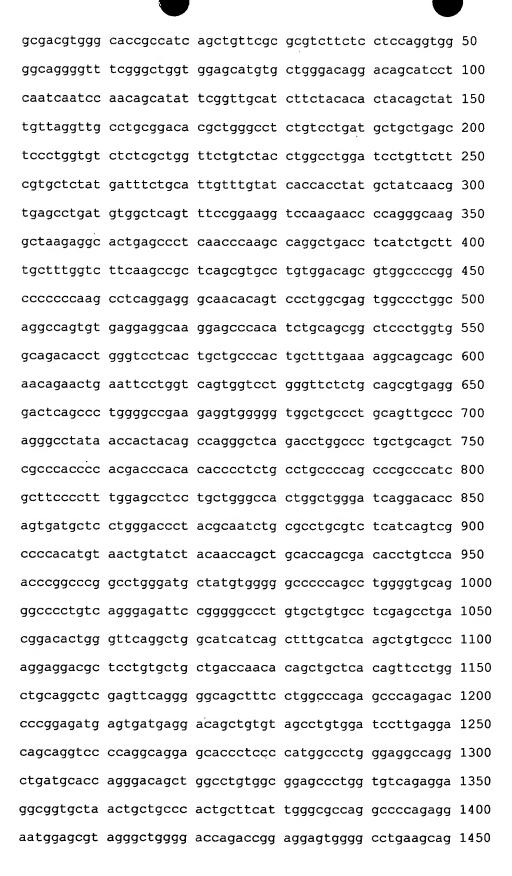
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Ile	Gly	Tyr	Cys	Ala 155	Ser	Lys	His	Ala	Leu 160	Arg	Gly	Phe	Phe	Asn 165
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Ser	Met	Ala	Asn	Asp 230	Leu	Lys	Glu	Val	Trp 235	Ile	Ser	Glu	Gln	Pro 240
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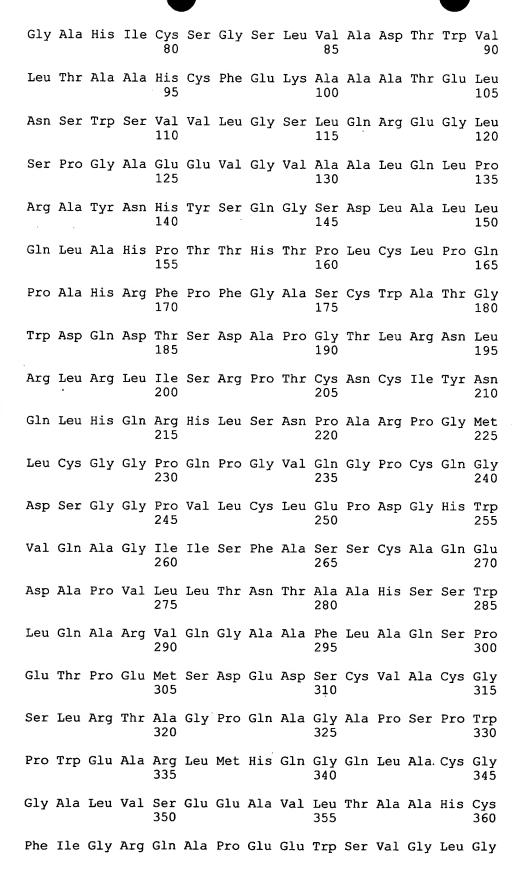
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65 70 75



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Ala	Ala	Leu	Gly	Ala 20	Leu	Trp	Phe	Cys	Leu 25	Thr	Gly	Ala	Leu	Glu 30
Val	Gln	Val	Pro	Glu 35	Asp	Pro	Val	Val	Ala 40	Leu	Val	Gly	Thr	Asp 45
Ala	Thr	Leu	Cys	Cys 50	Ser	Phe	Ser	Pro	Glu 55	Pro	Gly	Phe	Ser	Leu 60
Ala	Gln	Leu	Asn	Leu 65	Ile	Trp	Gln	Leu	Thr 70	Asp	Thr	Lys	Gln	Leu 75
Val	His	Ser	Phe	Ala 80	Glu	Gly	Gln	Asp	Gln 85	Gly	Ser	Ala	Tyr	Ala 90
Asn	Arg	Thr	Ala	Leu 95	Phe	Pro	Asp	Leu	Leu 100	Ala	Gln	Gly	Asn	Ala 105
Ser	Leu	Arg	Leu	Gln 110	Arg	Val	Arg	Val	Ala 115	Asp	Glu	Gly	Ser	Phe 120
Thr	Cys	Phe	Val	Ser 125	Ile	Arg	Asp	Phe	Gly 130	Ser	Ala	Ala	Val	Ser 135
Leu	Gln	Val	Ala	Ala 140	Pro	Tyr	Ser	Lys	Pro 145	Ser	Met	Thr	Leu	Glu 150
Pro	Asn	Lys	Asp	Leu 155	Arg	Pro	Gly	Asp	Thr 160	Val	Thr	Ile	Thr	Cys 165
Ser	Ser	Tyr	Gln	Gly 170	Tyr	Pro	Glu	Ala	Glu 175	Val	Phe	Trp	Gln	Asp 180
Gly	Gln	Gly	Val	Pro 185	Leu	Thr	Gly	Asn	Val 190	Thr	Thr	Ser	Gln	Met 195
Ala	Asn	Glu	Gln	Gly 200	Leu	Phe	Asp	Val	His 205	Ser	Val	Leu	Arg	Val 210
Val	Leu	Gly	Ala	Asn 215	Gly	Thr	Tyr	Ser	Cys 220	Leu	Val	Arg	Asn	Pro 225
Val	Leu	Gln	Gln	Asp 230	Ala	His	Xaa	Ser	Val 235	Thr	Ile	Thr	Gly	Gln 240
Pro	Met	Thr	Phe	Pro 245	Pro	Glu	Ala	Leu	Trp 250	Val	Thr	Val	Gly	Leu 255
Ser	Val	Суѕ	Leu	Ile 260	Ala	Leu	Leụ	Val	Ala 265	Leu	Ala	Phe	Val	Cys 270
Trp	Arg	Lys	Ile	Lys 275	Gln	Ser	Cys	Glu	Glu 280	Glu	Asn	Ala	Gly	Ala 285
Glu	Asp	Gln	Asp	Gly 290	Glu	Gly	Glu	Gly	Ser 295	Lys	Thr	Ala	Leu	Gln 300

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Ala

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<223> Synthetic oligonucleotide probe

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<211> 2336
<212> DNA
<213> Homo sapiens
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<221> unsure
<222> 1620, 1673
<223> unknown base
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 agtgaaaatt gaagttotoo agaagcoatt catotgocat cgcaagacca 300
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gttaaagcat atttaaagaa ggagtttgaa aaacatggtg cggtggtgaa 700
tgaaagtcat catgatgctt tggtggagga tatttttgat aaagaagatg 750
aagacaaaga tgggtttata tctgccagag aatttacata taaacacgat 800
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gagggcagtc atctttaaag aacattttat ttttatacaa tgttctttct 900 tgctttgttt tttattttta tatatttttt ctgactccta tttaaagaac 950 cccttaggtt tctaagtacc catttctttc tgataagtta ttgggaagaa 1000 aaagctaatt ggtctttgaa tagaagactt ctggacaatt tttcactttc 1050 acagatatga agctttgttt tactttctca cttataaatt taaaatgttg 1100 caactgggaa tataccacga catgagacca ggttatagca caaattagca 1150 ccctatattt ctgcttccct ctattttctc caagttagag gtcaacattt 1200 gaaaagcctt ttgcaatagc ccaaggcttg ctattttcat gttataatga 1250 aatagtttat gtgtaactgg ctctgagtct ctgcttgagg accagaggaa 1300 aatggttgtt ggacctgact tgttaatggc tactgcttta ctaaggagat 1350 gtgcaatgct gaagttagaa acaaggttaa tagccaggca tggtggctca 1400 tgcctgtaat cccagcactt tgggaggctg aggcgggcgg atcacctgag 1450 gttgggagtt cgagaccagc ctgaccaaca cggagaaacc ctatctctac 1500 taaaaataca aagtagcccg gcgtggtgat gcgtgcctgt aatcccagct 1550 acccaggaag getgaggegg cagaateaet tgaaccegag geegaggttg 1600 cggtaagccg agatcacctn cagcctggac actctgtctc gaaaaaagaa 1650 aagaacacgg ttaataccat atnaatatgt atgcattgag acatgctacc 1700 taggacttaa gctgatgaag cttggctcct agtgattggt ggcctattat 1750 gataaatagg acaaatcatt tatgtgtgag tttctttgta ataaaatgta 1800 tcaatatgtt atagatgagg tagaaagtta tatttatatt caatatttac 1850 ttcttaaggc tagcggaata tccttcctgg ttctttaatg ggtagtctat 1900 agtatattat actacaataa cattgtatca taagataaag tagtaaacca 1950 gtctacattt tcccatttct gtctcatcaa aaactgaagt tagctgggtg 2000 tggtggctca tgcctgtaat cccagcactt tgggggccaa ggagggtgga 2050 tcacttgaga tcaggagttc aagaccagcc tggccaacat ggtgaaacct 2100 tgtctctact aaaaatacaa aaattagcca ggcgtggtgg tgcacacctg 2150 tagtcccagc tactcgggag gctgagacag gagatttgct tgaacccggg 2200 aggcggaggt tgcagtgagc caagattgtg ccactgcact ccagcctggg 2250 tgacagagca agactccatc tcaaaaaaaa aaaaaagaag cagacctaca 2300

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<211> 211

<212> PRT

<213> Homo sapiens

<400> 145

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20 25 30

Val Leu Gln Lys Pro Phe Ile Cys His Arg Lys Thr Lys Gly Gly 35 40 45

Asp Leu Met Leu Val His Tyr Glu Gly Tyr Leu Glu Lys Asp Gly
50 55 60

Ser Leu Phe His Ser Thr His Lys His Asn Asn Gly Gln Pro Ile
65 70 75

Trp Phe Thr Leu Gly Ile Leu Glu Ala Leu Lys Gly Trp Asp Gln
80 85 90

Gly Leu Lys Gly Met Cys Val Gly Glu Lys Arg Lys Leu Ile Ile 95 100 105

Pro Pro Ala Leu Gly Tyr Gly Lys Glu Gly Lys Gly Lys Ile Pro 110 115 120

Pro Glu Ser Thr Leu Ile Phe Asn Ile Asp Leu Leu Glu Ile Arg 125 130 135

Asn Gly Pro Arg Ser His Glu Ser Phe Gln Glu Met Asp Leu Asn 140 145 150

Asp Asp Trp Lys Leu Ser Lys Asp Glu Val Lys Ala Tyr Leu Lys 155 160 165

Lys Glu Phe Glu Lys His Gly Ala Val Val Asn Glu Ser His His
170 175 180

Asp Ala Leu Val Glu Asp Ile Phe Asp Lys Glu Asp Glu Asp Lys 185 190 195

Asp Gly Phe Ile Ser Ala Arg Glu Phe Thr Tyr Lys His Asp Glu 200 205 210

Leu

<210> 146

<211> 26

<212> DNA

<213> Artificial Sequence

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<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
<400> 147
 gcccagagca ggaggaatga tgagc 25
<210> 148
<211> 49
<212> DNA
<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
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<210> 149
<211> 2196
<212> DNA
<213> Homo sapiens
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 caccetetee egtageeeac eegactaaca teteagtete tgaaaatgea 150
 cagagatgcc tggctacctc gccctgcctt cagcctcacg gggctcagtc 200
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 gccaccctca acgtcctcaa tggctctgac gcccgcctgc cctgcacctt 300
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 aagatcatta acctgaagct ggagcggttt caagaccgcg tggagttctc 450
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<211> 215

<212> PRT

<213> Homo sapiens

<400> 150

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Gly Leu Ser Leu Phe Phe Ser Leu Val Pro Pro Gly Arg Ser Met
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Glu Val Thr Val Pro Ala Thr Leu Asn Val Leu Asn Gly Ser Asp 35 40 45

Ala Arg Leu Pro Cys Thr Phe Asn Ser Cys Tyr Thr Val Asn His
50 55 60

Lys Gln Phe Ser Leu Asn Trp Thr Tyr Gln Glu Cys Asn Asn Cys
65 70 75

Ser Glu Glu Met Phe Leu Gln Phe Arg Met Lys Ile Ile Asn Leu 80 85 90

Lys Leu Glu Arg Phe Gln Asp Arg Val Glu Phe Ser Gly Asn Pro 95 100 105

Ser Lys Tyr Asp Val Ser Val Met Leu Arg Asn Val Gln Pro Glu 110 115 120

Asp Glu Gly Ile Tyr Asn Cys Tyr Ile Met Asn Pro Pro Asp Arg 125 130 135

His Arg Gly His Gly Lys Ile His Leu Gln Val Leu Met Glu Glu 140 145 150

Pro Pro Glu Arg Asp Ser Thr Val Ala Val Ile Val Gly Ala Ser 155 160 165

Val Gly Gly Phe Leu Ala Val Val Ile Leu Val Leu Met Val Val 170 175 180

Lys Cys Val Arg Arg Lys Lys Glu Gln Lys Leu Ser Thr Asp Asp 185 190 195

Leu Lys Thr Glu Glu Glu Gly Lys Thr Asp Gly Glu Gly Asn Pro
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Asp Asp Gly Ala Lys 215

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 gccctgcctt cagcctcacg gggctcagtc tctttttctc tttggtgcca 200
 ccaggacgga gcatggaggt ccacagtacc tgnccaccct caacgtcctc 250
 aatggctctg acgcccgcct gccctgccct tcaactcctg ctacacaqtg 300
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 ctctgaggag atgttcctcc agttccgcat gaagatcatt aacctgaagc 400
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<211> 368
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<213> Homo sapiens
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ccctgaactg gatttaccag gagtgcaaca actggctctg aggagatgtt 200
cctccagttc ccgcatggaa gatcatttaa cctgaaagct ggaagcggtt 250
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<213> Artificial Sequence
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<400> 154
 gcacgtttct cagcatcacc gac 23
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<213> Homo sapiens
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tcaggctggt ttacaacaaa acatccaggg ccacccagtt tcctgatggt 350
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gccttgtggg ctggggctac acacggggtg aggatgtccg aggggctccc 500
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<211> 412

<212> PRT

<213> Artificial

<400> 157

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Ala Leu Pro Ala Gly Arg His Pro Pro Val Val Leu Val Pro Gly

Asp Leu Gly Asn Gln Leu Glu Ala Lys Leu Asp Lys Pro Thr Val 50 55 60

Val His Tyr Leu Cys Ser Lys Lys Thr Glu Ser Tyr Phe Thr Ile
65 70 75

Trp Leu Asn Leu Glu Leu Leu Leu Pro Val Ile Ile Asp Cys Trp
80 85 90

Ile Asp Asn Ile Arg Leu Val Tyr Asn Lys Thr Ser Arg Ala Thr 95 100 105

Gln Phe Pro Asp Gly Val Asp Val Arg Val Pro Gly Phe Gly Lys

				110					115					120
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Ser	Tyr	Phe	His	Thr 140	Met	Val	Glu	Ser	Leu 145	Val	Gly	Trp	Gly	Tyr 150
Thr	Arg	Gly	Glu	Asp 155	Val	Arg	Gly	Ala	Pro 160	Tyr	Asp	Trp	Arg	Arg 165
Ala	Pro	Asn	Glu	Asn 170	Gly	Pro	Tyr	Phe	Leu 175	Ala	Leu	Arg	Glu	Met 180
Ile	Glu	Glu	Met	Tyr 185	Gln	Leu	Tyr	Gly	Gly 190	Pro	Val	Val	Leu	Val 195
Ala	His	Ser	Met	Gly 200	Asn	Met	Tyr	Thr	Leu 205	Tyr	Phe	Leu	Gln	Arg 210
Gln	Pro	Gln	Ala	Trp 215	Lys	Asp	Lys	Tyr	Ile 220	Arg	Ala	Phe	Val	Ser 225
Leu	Gly	Ala	Pro	Trp 230	Gly	Gly	Val	Ala	Lys 235	Thr	Leu	Arg	Val	Leu 240
Ala	Ser	Gly	Asp	Asn 245	Asn	Arg	Ile	Pro	Val 250	Ile	Gly	Pro	Leu	Lys 255
Ile	Arg	Glu	Gln	Gln 260	Arg	Ser	Ala	Val	Ser 265	Thr	Ser	Trp	Leu	Leu 270
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Gly	Leu	Val	Glu	Ala 320	Thr	Met	Pro	Pro	Gly 325	Val	Gln	Leu	His	Cys 330
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Ser	Arg	Gln	Glu	His 380	Gln	Val	Leu	Leu	Gln 385	Glu	Leu	Pro	Gly	Ser 390
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cgcaagtacc tggtcattgg tgacctgctc ttctcagctc tctggacctt 400

cctgtggttt gttggtttct gcttcctcac caaccagtgg gcagtcacca 450 acccgaagga cgtgctggtg ggggccgact ctgtgagggc agccatcacc 500 ttcagcttct tttccatctt ctcctggggt gtgctggcct ccctggccta 550 ccagcgctac aaggctggcg tggacgactt catccagaat tacgttgacc 600 ccactccgga ccccaacact gcctacgcct cctacccagg tgcatctgtg 650 gacaactacc aacagccacc cttcacccag aacgcggaga ccaccgaggg 700 ctaccagccg cccctgtgt actgagtggc ggttagcgtg ggaaggggga 750 cagagaggc cctccctct gccctggact ttcccatcag cctcctggaa 800 ctgccagccc ctctcttca cctgttccat cctgtgcagc tgacacacag 850 ctaaggagcc tcatagcctg gcgggggctg gcagagccac accccaagtg 900 cctgtgccca gagggcttca gtcagccgct cactcctcca gqqcactttt 950 aggaaagggt ttttagctag tgtttttcct cgcttttaat gacctcagcc 1000 ccgcctgcag tggctagaag ccagcaggtg cccatgtgct actgacaagt 1050 gcctcagctt cccccggcc cgggtcaggc cgtgggagcc gctattatct 1100 gcgttctctg ccaaagactc gtgggggcca tcacacctgc cctgtgcagc 1150 ggagccggac caggetettg tgteeteact caggtttget teceetqtge 1200 ccactgctgt atgatctggg ggccaccacc ctgtgccggt ggcctctggg 1250 ctgcctcccg tggtgtgagg gcggggctgg tgctcatggc acttcctcct 1300 tgctcccacc cctggcagca gggaagggct ttgcctgaca acacccagct 1350 ttatgtaaat attctgcagt tgttacttag gaagcctggg gagggcaggg 1400 gtgccccatg gctcccagac tctgtctgtg ccgagtgtat tataaaatcg 1450 tgggggagat gcccggcctg ggatgctgtt tggagacgga ataaatgttt 1500 tctcattcaa ag 1512

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<211> 224

<212> PRT

<213> Homo sapiens

<400> 162

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Val Cys Leu Val Phe Ala Leu Ile Val Phe Ser Cys Ile Tyr Gly Glu Gly Tyr Ser Asn Ala His Glu Ser Lys Gln Met Tyr Cys Val Phe Asn Arg Asn Glu Asp Ala Cys Arg Tyr Gly Ser Ala Ile Gly Val Leu Ala Phe Leu Ala Ser Ala Phe Phe Leu Val Val Asp Ala Tyr Phe Pro Gln Ile Ser Asn Ala Thr Asp Arg Lys Tyr Leu Val Ile Gly Asp Leu Leu Phe Ser Ala Leu Trp Thr Phe Leu Trp Phe 110 115 Val Gly Phe Cys Phe Leu Thr Asn Gln Trp Ala Val Thr Asn Pro Lys Asp Val Leu Val Gly Ala Asp Ser Val Arg Ala Ala Ile Thr 140 Phe Ser Phe Phe Ser Ile Phe Ser Trp Gly Val Leu Ala Ser Leu Ala Tyr Gln Arg Tyr Lys Ala Gly Val Asp Asp Phe Ile Gln Asn 170 Tyr Val Asp Pro Thr Pro Asp Pro Asn Thr Ala Tyr Ala Ser Tyr Pro Gly Ala Ser Val Asp Asn Tyr Gln Gln Pro Pro Phe Thr Gln 200 Asn Ala Glu Thr Thr Glu Gly Tyr Gln Pro Pro Pro Val Tyr 215 <210> 163 <211> 24 <212> DNA <213> Artificial Sequence <220> <223> Synthetic oligonucleotide probe <400> 163 tggtcttcgc cttgatcgtg ttct 24 <210> 164

- <211> 20
- <212> DNA
- <213> Artificial Sequence
- <223> Synthetic oligonucleotide probe

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 ccaggaggct catgggaaag tcc 23
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<223> Synthetic oligonucleotide probe
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<sup>&</sup>lt;210> 169

<sup>&</sup>lt;211> 802

<sup>&</sup>lt;212> PRT

<sup>&</sup>lt;213> Homo sapiens

<sup>&</sup>lt;400> 169

Met Pro Val Ala Glu Ala Pro Gln Val Ala Gly Gly Gln Gly Asp Gly Gly Asp Gly Glu Glu Ala Glu Pro Glu Gly Met Phe Lys Ala Cys Glu Asp Ser Lys Arg Lys Ala Arg Gly Tyr Leu Arg Leu Val Pro Leu Phe Val Leu Leu Ala Leu Leu Val Leu Ala Ser Ala Gly 50 Val Leu Leu Trp Tyr Phe Leu Gly Tyr Lys Ala Glu Val Met Val Ser Gln Val Tyr Ser Gly Ser Leu Arg Val Leu Asn Arg His Phe Ser Gln Asp Leu Thr Arg Arg Glu Ser Ser Ala Phe Arg Ser Glu Thr Ala Lys Ala Gln Lys Met Leu Lys Glu Leu Ile Thr Ser Thr Arg Leu Gly Thr Tyr Tyr Asn Ser Ser Ser Val Tyr Ser Phe Gly 135 Glu Gly Pro Leu Thr Cys Phe Phe Trp Phe Ile Leu Gln Ile Pro Glu His Arg Arg Leu Met Leu Ser Pro Glu Val Val Gln Ala Leu Leu Val Glu Glu Leu Leu Ser Thr Val Asn Ser Ser Ala Ala Val Pro Tyr Arg Ala Glu Tyr Glu Val Asp Pro Glu Gly Leu Val Ile Leu Glu Ala Ser Val Lys Asp Ile Ala Ala Leu Asn Ser Thr Leu Gly Cys Tyr Arg Tyr Ser Tyr Val Gly Gln Gly Gln Val Leu Arg Leu Lys Gly Pro Asp His Leu Ala Ser Ser Cys Leu Trp His Leu Gln Gly Pro Lys Asp Leu Met Leu Lys Leu Arg Leu Glu Trp Thr 255 Leu Ala Glu Cys Arg Asp Arg Leu Ala Met Tyr Asp Val Ala Gly Pro Leu Glu Lys Arg Leu Ile Thr Ser Val Tyr Gly Cys Ser Arg 285 Gln Glu Pro Val Val Glu Val Leu Ala Ser Gly Ala Ile Met Ala

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Leu	Ser	Val	Gln	Pro 320	Val	Val	Phe	Gln	Ala 325	Cys	Glu	Val	Asn	Leu 330
Thr	Leu	Asp	Asn	Arg 335	Leu	Asp	Ser	Gln	Gly 340	Val	Leu	Ser	Thr	Pro 345
Tyr	Phe	Pro	Ser	Tyr 350	Tyr	Ser	Pro	Gln	Thr 355	His	Суѕ	Ser	Trp	His 360
Leu	Thr	Val	Pro	Ser 365	Leu	Asp	Tyr	Gly	Leu 370	Ala	Leu	Trp	Phe	Asp 375
Ala	Tyr	Ala	Leu	Arg 380	Arg	Gln	Lys	Tyr	Asp 385	Leu	Pro	Cys	Thr	Gln 390
Gly	Gln	Trp	Thr	Ile 395	Gln	Asn	Arg	Arg	Leu 400	Cys	Gly	Leu	Arg	Ile 405
Leu	Gln	Pro	Tyr	Ala 410	Glu	Arg	Ile	Pro	Val 415	Val	Ala	Thr	Ala	Gly 420
Ile	Thr	Ile	Asn	Phe 425	Thr	Ser	Gln	Ile	Ser 430	Leu	Thr	Gly	Pro	Gly 435
Val	Arg	Val	His	Tyr 440	Gly	Leu	Tyr	Asn	Gln 445	Ser	Asp	Pro	Cys	Pro 450
Gly	Glu	Phe	Leu	Cys 455	Ser	Val	Asn	Gly	Leu 460	Cys	Val	Pro	Ala	Cys 465
Asp	Gly	Val	Lys	Asp 470	Cys	Pro	Asn	Gly	Leu 475	Asp	Glu	Arg	Asn	Cys 480
Val	Cys	Arg	Ala	Thr 485	Phe	Gln	Cys	Lys	Glu 490	Asp	Ser	Thr	Cys	Ile 495
Ser	Leu	Pro	Lys	Val 500	Cys	Asp	Gly	Gln	Pro 505	Asp	Cys	Leu	Asn	Gly 510
Ser	Asp	Glu	Glu	Gln 515	Cys	Gln	Glu	Gly	Val 520	Pro	Cys	Gly	Thr	Phe 525
Thr	Phe	Gln	Cys	Glu 530	Asp	Arg	Ser	Cys	Val 535	Lys	Lys	Pro	Asn	Pro 540
Gln	Cys	Asp	Gly	Arg 545	Pro	Asp	Cys <sub>.</sub>	Arg	Asp 550	Gly	Ser	Asp	Glu	Glu 555
His	Cys	Asp	Cys	Gly 560	Leu	Gln	Gly	Pro	Ser 565	Ser	Arg	Ile	Val	Gly 570
Gly	Ala	Val	Ser	Ser 575	Glu	Gly	Glu	Trp	Pro 580	Trp	Gln	Ala	Ser	Leu 585

Gln Val Arg Gly Arg His Ile Cys Gly Gly Ala Leu Ile Ala Asp Arg Trp Val Ile Thr Ala Ala His Cys Phe Gln Glu Asp Ser Met 615 Ala Ser Thr Val Leu Trp Thr Val Phe Leu Gly Lys Val Trp Gln Asn Ser Arg Trp Pro Gly Glu Val Ser Phe Lys Val Ser Arg Leu 635 640 645 Leu Leu His Pro Tyr His Glu Glu Asp Ser His Asp Tyr Asp Val 650 Ala Leu Leu Gln Leu Asp His Pro Val Val Arg Ser Ala Ala Val 665 Arg Pro Val Cys Leu Pro Ala Arg Ser His Phe Phe Glu Pro Gly 680 690 Leu His Cys Trp Ile Thr Gly Trp Gly Ala Leu Arg Glu Gly Gly 695 705 Pro Ile Ser Asn Ala Leu Gln Lys Val Asp Val Gln Leu Ile Pro Gln Asp Leu Cys Ser Glu Ala Tyr Arg Tyr Gln Val Thr Pro Arg Met Leu Cys Ala Gly Tyr Arg Lys Gly Lys Lys Asp Ala Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Ala Leu Ser Gly Arg 765 Trp Phe Leu Ala Gly Leu Val Ser Trp Gly Leu Gly Cys Gly Arg Pro Asn Tyr Phe Gly Val Tyr Thr Arg Ile Thr Gly Val Ile Ser 790

Trp Ile Gln Gln Val Val Thr 800

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<211> 1327

<212> DNA

<213> Homo sapiens

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tgttctgtga atggactctg tgtccctgcc tgtgatgggg tcaaggactg 250 ccccaacggc ctggatgaga gaaactgcgt ttgcagagcc acattccagt 300 qcaaagagga cagcacatgc atctcactgc ccaaggtctg tgatgggcag 350 cctgattgtc tcaacggcag cgatgaagag cagtgccagg aaggggtgcc 400 atgtgggaca ttcaccttcc agtgtgagga ccggagctgc gtgaagaagc 450 ccaacccgca gtgtgatggg cggcccgact gcaqqqacqq ctcqqatqaq 500 gagcactgtg actgtggcct ccagggcccc tccagccgca ttgttggtgg 550 agctgtgtcc tccgagggtg agtggccatg gcaggccagc ctccaggttc 600 ggggtcgaca catctgtggg ggggccctca tcgctgaccg ctgggtgata 650 acagetgeec actgetteea ggaggaeage atggeeteea eggtgetgtg 700 gaccgtgttc ctgggcaagg tgtggcagaa ctcgcgctgg cctqqaqaqq 750 tgtccttcaa ggtgagccgc ctgctcctgc acccgtacca cgaagaggac 800 agccatgact acgacgtggc gctgctqcaq ctcgaccacc cggtggtgcg 850 ctcggccgcc gtgcgccccg tctgcctgcc cgcgcgctcc cacttcttcg 900 agcccggcct gcactgctgg attacgggct ggggcgcctt gcgcgagggc 950 ggccccatca gcaacgctct gcagaaagtg gatgtgcagt tgatcccaca 1000 ggacctgtgc agcgaggcct atcgctacca ggtgacgcca cgcatgctgt 1050 gtgccggcta ccgcaagggc aagaaggatg cctgtcaggg tgactcaggt 1100 ggtccgctgg tgtgcaaggc actcagtggc cgctggttcc tgqcqqqqct 1150 ggtcagctgg ggcctgggct gtggccggcc taactacttc ggcgtctaca 1200 cccgcatcac aggtgtgatc agctggatcc agcaagtggt gacctgagga 1250 actgccccc tgcaaagcag ggcccacctc ctggactcag agagcccagg 1300 gcaactgcca agcaggggga caagtat 1327

<210> 171

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 171

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<210> 172

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ISSTELL LOISOI
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<211> 25
<212> DNA
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<213> Artificial Sequence
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 aggcagggac acagagtcca ttcac 25
<210> 176
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<210> 177
<211> 1510
<212> DNA
<213> Homo sapiens
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<210> 178

<211> 354

<212> PRT

<213> Homo sapiens

<400> 178

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Leu Glu Asp Lys Leu His Lys Pro Lys Ala Thr Gln Thr Glu Val
35 40 45

Lys Pro Ser Val Arg Phe Asn Leu Arg Thr Ser Lys Asp Pro Glu
50 55 60

His Glu Gly Cys Tyr Leu Ser Val Gly His Ser Gln Pro Leu Glu
65 70 75

Asp Cys Ser Phe Asn Met Thr Ala Lys Thr Phe Phe Ile Ile His
80 85 90

Gly Trp Thr Met Ser Gly Ile Phe Glu Asn Trp Leu His Lys Leu
95 100 105

Val Ser Ala Leu His Thr Arg Glu Lys Asp Ala Asn Val Val 110 115 120

Val Asp Trp Leu Pro Leu Ala His Gln Leu Tyr Thr Asp Ala Val 125 130 135

Asn Asn Thr Arg Val Val Gly His Ser Ile Ala Arg Met Leu Asp 140 145 150

Trp Leu Gln Glu Lys Asp Asp Phe Ser Leu Gly Asn Val His Leu 155 160 165

Ile Gly Tyr Ser Leu Gly Ala His Val Ala Gly Tyr Ala Gly Asn 170 175 180

Phe Val Lys Gly Thr Val Gly Arg Ile Thr Gly Leu Asp Pro Ala 185 190 195

Gly Pro Met Phe Glu Gly Ala Asp Ile His Lys Arg Leu Ser Pro 200 205 210

Asp Asp Ala Asp Phe Val Asp Val Leu His Thr Tyr Thr Arg Ser 215 220 225

Phe Gly Leu Ser Ile Gly Ile Gln Met Pro Val Gly His Ile Asp 230 235 240

Ile Tyr Pro Asn Gly Gly Asp Phe Gln Pro Gly Cys Gly Leu Asn Asp Val Leu Gly Ser Ile Ala Tyr Gly Thr Ile Thr Glu Val Val 260 Lys Cys Glu His Glu Arg Ala Val His Leu Phe Val Asp Ser Leu Val Asn Gln Asp Lys Pro Ser Phe Ala Phe Gln Cys Thr Asp Ser 290 Asn Arg Phe Lys Lys Gly Ile Cys Leu Ser Cys Arg Lys Asn Arg Cys Asn Ser Ile Gly Tyr Asn Ala Lys Lys Met Arg Asn Lys Arg 320 325 330 Asn Ser Lys Met Tyr Leu Lys Thr Arg Ala Gly Met Pro Phe Arg 335 345 Gly Asn Leu Gln Ser Leu Glu Cys Pro 350

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<210> 180 <211> 26 <212> DNA

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<220>

<223> Synthetic oligonucleotide probe

<400> 180 gctattacaa cggttcttgc ggcagc 26

<210> 181 <211> 44 <212> DNA

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<210> 182

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<213> Homo sapiens

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<210> 183

<211> 713

<212> PRT

<213> Homo sapiens

<400> 183

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Ala His Pro Asp Arg Ile Ile Phe Pro Asn His Ala Cys Glu Asp 20 25 30

Pro Pro Ala Val Leu Leu Glu Val Gln Gly Thr Leu Gln Arg Pro 35 40 45

Leu Val Arg Asp Ser Arg Thr Ser Pro Ala Asn Cys Thr Trp Leu 50 55 60

Ile Leu Gly Ser Lys Glu Gln Thr Val Thr Ile Arg Phe Gln Lys
65 70 75

Leu His Leu Ala Cys Gly Ser Glu Arg Leu Thr Leu Arg Ser Pro 80 85 90

Leu Gln Pro Leu Ile Ser Leu Cys Glu Ala Pro Pro Ser Pro Leu 95 100 105

Gln Leu Pro Gly Gly Asn Val Thr Ile Thr Tyr Ser Tyr Ala Gly 110 115 120

Ala Arg Ala Pro Met Gly Gln Gly Phe Leu Leu Ser Tyr Ser Gln 125 130 135

Asp Trp Leu Met Cys Leu Gln Glu Glu Phe Gln Cys Leu Asn His 140 145 150

Arg Cys Val Ser Ala Val Gln Arg Cys Asp Gly Val Asp Ala Cys 155 160 165

Gly Asp Gly Ser Asp Glu Ala Gly Cys Ser Ser Asp Pro Phe Pro

				170					175					180
Gly	Leu	Thr	Pro	Arg 185	Pro	Val	Pro	Ser	Leu 190	Pro	Суѕ	Asn	Val	Thr 195
Leu	Glu	Asp	Phe	Tyr 200	Gly	Val	Phe	Ser	Ser 205	Pro	Gly	Tyr	Thr	His 210
Leu	Ala	Ser	Val	Ser 215	His	Pro	Gln	Ser	Cys 220	His	Trp	Leu	Leu	Asp 225
Pro	His	Asp	Gly	Arg 230	Arg	Leu	Ala	Val	Arg 235	Phe	Thr	Ala	Leu	Asp 240
Leu	Gly	Phe	Gly	Asp 245	Ala	Val	His	Val	Tyr 250	Asp	Gly	Pro	Gly	Pro 255
Pro	Glu	Ser	Ser	Arg 260	Leu	Leu	Arg	Ser	Leu 265	Thr	His	Phe	Ser	Asn 270
Gly	Lys	Ala	Val	Thr 275	Val	Glu	Thr	Leu	Ser 280	Gly	Gln	Ala	Val	Val 285
Ser	Tyr	His	Thr	Val 290	Ala	Trp	Ser	Asn	Gly 295	Arg	Gly	Phe	Asn	Ala 300
Thr	Tyr	His	Val	Arg 305	Gly	Tyr	Cys	Leu	Pro 310	Trp	Asp	Arg	Pro	Cys 315
Gly	Leu	Gly	Ser	Gly 320	Leu	Gly	Ala	Gly	Glu 325	Gly	Leu	Gly	Glu	Arg 330
Cys	Tyr	Ser	Glu	Ala 335	Gln	Arg	Суз	Asp	Gly 340	Ser	Trp	Asp	Суз	Ala 345
Asp	Gly	Thr	Asp	Glu 350	Glu	Asp	Суѕ	Pro	Gly 355	Cys	Pro	Pro	Gly	His 360
Phe	Pro	Суз	Gly	Ala 365	Ala	Gly	Thr	Ser	Gly 370	Ala	Thr	Ala	Cys	Tyr 375
Leu	Pro	Ala	Asp	Arg 380	Cys	Asn	Tyr	Gln	Thr 385	Phe	Суз	Ala	Asp	Gly 390
Ala	Asp	Glu	Arg	Arg 395	Cys	Arg	His	Cys	Gln 400	Pro	Gly	Asn	Phe	Arg 405
Cys	Arg	Asp	Glu	Lys 410	Суз	Val	Tyr	Glu	Thr 415	Trp	Val	Суз	Asp	Gly 420
Gln	Pro	Asp	Суз	Ala 425	Asp	Gly	Ser	Asp	Glu 430	Trp	Asp	Суз	Ser	Tyr 435
Val	Leu	Pro	Arg	Lys 440	Val	Ile	Thr	Ala	Ala 445	Val	Ile	Gly	Ser	Leu 450
Val	Суѕ	Gly	Leu	Leu 455	Leu	Val	Ile	Ala	Leu 460	Gly	Cys	Thr	Cys	Lys 465

Leu Tyr Ala Ile Arg Thr Gln Glu Tyr Ser Ile Phe Ala Pro Leu Ser Arg Met Glu Ala Glu Ile Val Gln Gln Ala Pro Pro Ser Tyr Gly Gln Leu Ile Ala Gln Gly Ala Ile Pro Pro Val Glu Asp Phe Pro Thr Glu Asn Pro Asn Asp Asn Ser Val Leu Gly Asn Leu 515 520 Arg Ser Leu Leu Gln Ile Leu Arg Gln Asp Met Thr Pro Gly Gly 530 535 Gly Pro Gly Ala Arg Arg Gln Arg Gly Arg Leu Met Arg Arg 550 Leu Val Arg Arg Leu Arg Arg Trp Gly Leu Leu Pro Arg Thr Asn Thr Pro Ala Arg Ala Ser Glu Ala Arg Ser Gln Val Thr Pro Ser Ala Ala Pro Leu Glu Ala Leu Asp Gly Gly Thr Gly Pro Ala Arg Glu Gly Gly Ala Val Gly Gly Gln Asp Gly Glu Gln Ala Pro Pro Leu Pro Ile Lys Ala Pro Leu Pro Ser Ala Ser Thr Ser Pro Ala Pro Thr Thr Val Pro Glu Ala Pro Gly Pro Leu Pro Ser Leu Pro Leu Glu Pro Ser Leu Leu Ser Gly Val Val Gln Ala Leu Arg Gly Arg Leu Leu Pro Ser Leu Gly Pro Pro Gly Pro Thr Arg Ser Pro Pro Gly Pro His Thr Ala Val Leu Ala Leu Glu Asp Glu Asp Asp Val Leu Leu Val Pro Leu Ala Glu Pro Gly Val Trp Val Ala Glu Ala Glu Asp Glu Pro Leu Leu Thr

- <210> 184
- <211> 20
- <212> DNA
- <213> Artificial Sequence
- <220>
- <223> Synthetic oligonucleotide probe

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    <210> 185
    <211> 18
    <212> DNA
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    <220>
    <223> Synthetic oligonucleotide probe
    <400> 185
     gcaaggtcat tacagctg 18
    <210> 186
    <211> 23
    <212> DNA
    <213> Artificial Sequence
    <220>
    <223> Synthetic oligonucleotide probe
    <400> 186
     agaacatagg agcagtccca ctc 23
    <210> 187
    <211> 23
    <212> DNA
    <213> Artificial Sequence
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    <220>
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    <223> Synthetic oligonucleotide probe
    <400> 187
     tgcctgctgc tgcacaatct cag 23
<210> 188
    <211> 45
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    <213> Artificial Sequence
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    <223> Synthetic oligonucleotide probe
    <400> 188
     ggctattgct tgccttggga cagaccctgt ggcttaggct ctggc 45
    <210> 189
    <211> 663
    <212> DNA
    <213> Homo sapiens
    <400> 189
     cgagctgggc gagaagtagg ggagggcggt gctccgccgc ggtggcggtt 50
     gctatcgctt cgcagaacct actcaggcag ccagctgaga agagttgagg 100
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gaaagtgctg ctgctgggtc tgcagacgcg atggataacg tgcagccqaa 150

aataaaacat cgccccttct gcttcagtgt gaaaggccac gtgaagatgc 200
tgcggctggc actaactgtg acatctatga cctttttat catcgcacaa 250
gcccctgaac catatattgt tatcactgga tttgaagtca ccgttatctt 300
attttcata cttttatatg tactcagact tgatcgatta atgaagtggt 350
tattttggcc tttgcttgat attatcaact cactggtaac aacagtattc 400
atgctcatcg tatctgtgtt ggcactgata ccagaaacca caacattgac 450
agttggtgga ggggtgtttg cacttgtgac agcagtatgc tgtcttgccg 500
acggggccct tatttaccgg aagcttctgt tcaatcccag cggtccttac 550
cagaaaaagc ctgtgcatga aaaaaaagaa gttttgtaat tttatattac 600
tttttagttt gatactaagt attaaacata tttctgtatt cttccaaaaa 650
aaaaaaaaaa aaa 663

<210> 190

<211> 152

<212> PRT

<213> Homo sapiens

<400> 190

Met Asp Asn Val Gln Pro Lys Ile Lys His Arg Pro Phe Cys Phe 1 5 10 15

Ser Val Lys Gly His Val Lys Met Leu Arg Leu Ala Leu Thr Val 20 25 30

Thr Ser Met Thr Phe Phe Ile Ile Ala Gln Ala Pro Glu Pro Tyr 35 40 45

Ile Val Ile Thr Gly Phe Glu Val Thr Val Ile Leu Phe Phe Ile 50 55 60

Leu Leu Tyr Val Leu Arg Leu Asp Arg Leu Met Lys Trp Leu Phe
65 70 75

Trp Pro Leu Leu Asp Ile Ile Asn Ser Leu Val Thr Thr Val Phe
80 85 90

Met Leu Ile Val Ser Val Leu Ala Leu Ile Pro Glu Thr Thr 95 100 105

Leu Thr Val Gly Gly Val Phe Ala Leu Val Thr Ala Val Cys
110 115 120

Cys Leu Ala Asp Gly Ala Leu Ile Tyr Arg Lys Leu Leu Phe Asn

Pro Ser Gly Pro Tyr Gln Lys Lys Pro Val His Glu Lys Lys Glu 140 145 150 Val Leu

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<211> 495
<212> DNA
<213> Homo sapiens
<220>
<221> unsure
<222> 78, 212, 234, 487
<223> unknown base
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 ctgctgctgg gtctgcagac gcgatggata acgtgcagcc gaaaataaaa 150
 catcgcccct tctgcttcag tgtgaaaggc cacgtgaaga tgctgcggct 200
 ggcactaact gngacatcta tgaccttttt tatnatcgca caagcccctg 250
 aaccatatat tgttatcact ggatttgaag tcaccgttat cttatttttc 300
 atacttttat atgtactcag acttgatcga ttaatgaagt ggttattttg 350
 gcctttgctt gatattatca actcactqqt aacaacaqta ttcatqctca 400
 tcgtatctgt gttggcactg ataccagaaa ccacaacatt gacagttggt 450
 ggaggggtgt ttgcacttgt gacagcagta tgctgtnttg ccgac 495
<210> 192
<211> 25
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 192
 cgttttgcag aacctactca ggcag 25
<210> 193
<211> 25
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 193
 cctccaccaa ctgtcaatgt tgtgg 25
<210> 194
<211> 40
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<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 194
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<210> 195
<211> 1879
<212> DNA
<213> Homo sapien
<400> 195
ggaccggcta ggctgggcgc gcccccgggg ccccgccgtg ggcatgggcg 100
cactggcccg ggcgctgctg ctgcctctgc tggcccagtg gctcctgcgc 150
geogeology agetggeole egegeoltte acgetgeole teegggtgge 200
cgcggccacg aaccgcgtag ttgcgcccac cccgggaccc gggacccctg 250
ccgagcgcca cgccgacggc ttggcgctcg ccctggagcc tgccctggcg 300
tececegegg gegeegeeaa ettettggee atggtagaea aeetgeaggg 350
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agaagctaca gattctcgtt gacactggaa gcagtaactt tgccgtggca 450
ggaaccccgc actcctacat agacacgtac tttgacacag agaggtctag 500
cacataccgc tccaagggct ttgacgtcac agtgaagtac acacaaggaa 550
gctggacggg cttcgttggg gaagacctcg tcaccatccc caaaggcttc 600
aatacttctt ttcttgtcaa cattgccact atttttgaat cagagaattt 650
ctttttgcct gggattaaat ggaatggaat acttggccta gcttatgcca 700
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cttgcccgtt gctggatctg ggaccaacgg aggtagtctt gtcttgggtg 850
gaattgaacc aagtttgtat aaaggagaca tctggtatac ccctattaag 900
gaagagtggt actaccagat agaaattctg aaattggaaa ttggaggcca 950
aagccttaat ctggactgca gagagtataa cgcagacaag gccatcgtgg 1000
acagtggcac cacgctgctg cgcctgcccc agaaggtgtt tgatgcggtg 1050
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gtggaagctg tggcccgcgc atctctgatt ccagaattct ctgatggttt 1100

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<210> 196

<211> 518

<212> PRT

<213> Homo sapien

<400> 196

Met Gly Ala Leu Ala Arg Ala Leu Leu Pro Leu Leu Ala Gln
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Trp Leu Leu Arg Ala Ala Pro Glu Leu Ala Pro Ala Pro Phe Thr 20 25 30

Leu Pro Leu Arg Val Ala Ala Ala Thr Asn Arg Val Val Ala Pro
35 40 45

Thr Pro Gly Pro Gly Thr Pro Ala Glu Arg His Ala Asp Gly Leu 50 55 60

Ala Leu Ala Leu Glu Pro Ala Leu Ala Ser Pro Ala Gly Ala Ala
65 70 75

Asn Phe Leu Ala Met Val Asp Asn Leu Gln Gly Asp Ser Gly Arg 80 85 90

Gly Tyr Tyr Leu Glu Met Leu Ile Gly Thr Pro Pro Gln Lys Leu
95 100 105

Gln	Ile	Leu	Val	Asp 110	Thr	Gly	Ser	Ser	Asn 115	Phe	Ala	Val	Ala	Gly 120
Thr	Pro	His	Ser	Tyr 125	Ile	Asp	Thr	Tyr	Phe 130	Asp	Thr	Glu	Arg	Ser 135
Ser	Thr	Tyr	Arg	Ser 140	Lys	Gly	Phe	Asp	Val 145	Thr	Val	Lys	Tyr	Thr 150
Gln	Gly	Ser	Trp	Thr 155	Gly	Phe	Val	Gly	Glu 160	Asp	Leu	Val	Thr	Ile 165
Pro	Lys	Gly	Phe	Asn 170	Thr	Ser	Phe	Leu	Val 175	Asn	Ile	Ala	Thr	Ile 180
Phe	Glu	Ser	Glu	Asn 185	Phe	Phe	Leu	Pro	Gly 190	Ile	Lys	Trp	Asn	Gly 195
Ile	Leu	Gly	Leu	Ala 200	Tyr	Ala	Thr	Leu	Ala 205	Lys	Pro	Ser	Ser	Ser 210
Leu	Glu	Thr	Phe	Phe 215	Asp	Ser	Leu	Val	Thr 220	Gln	Ala	Asn	Ile	Pro 225
Asn	Val	Phe	Ser	Met 230	Gln	Met	Суз	Gly	Ala 235	Gly	Leu	Pro	Val	Ala 240
Gly	Ser	Gly	Thr	Asn 245	Gly	Gly	Ser	Leu	Val 250	Leu	Gly	Gly	Ile	Glu 255
Pro	Ser	Leu	Tyr	Lys 260	Gly	Asp	Ile	Trp	Tyr 265	Thr	Pro	Ile	Lys	Glu 270
Glu	Trp	Tyr	Tyr	Gln 275	Ile	Glu	Ile	Leu	Lys 280	Leu	Glu	Ile	Gly	Gly 285
Gln	Ser	Leu	Asn	Leu 290	Asp	Cys	Arg	Glu	Tyr 295	Asn	Ala	Asp	Lys	Ala 300
Ile	Val	Asp	Ser	Gly 305	Thr	Thr	Leu	Leu	Arg 310	Leu	Pro	Gln	Lys	Val 315
Phe	Asp	Ala	Val	Val 320	Glu	Ala	Val	Ala	Arg 325	Ala	Ser	Leu	Ile	Pro 330
Glu	Phe	Ser	Asp	Gly 335	Phe	Trp	Thr	Gly	Ser 340	Gln	Leu	Ala	Cys	Trp 345
Thr	Asn	Ser	Glu	Thr 350	Pro	Trp	Ser	Tyr	Phe 355	Pro	Lys	Ile	Ser	Ile 360
Tyr	Leu	Arg	Asp	Glu 365	Asn	Ser	Ser	Arg	Ser 370	Phe	Arg	Ile	Thr	Ile 375
Leu	Pro	Gln	Leu	Tyr 380	Ile	Gln	Pro	Met	Met 385	Gly	Ala	Gly	Leu	Asn 390
Tyr	Glu	Cys	Tyr	Arg	Phe	Gly	Ile	Ser	Pro	Ser	Thr	Asn	Ala	Leu

				395					400					405
Val	Ile	Gly	Ala	Thr 410	Val	Met	Glu	Gly	Phe 415	Tyr	Val	Ile	Phe	Asp 420
Arg	Ala	Gln	Lys	Arg 425	Val	Gly	Phe	Ala	Ala 430	Ser	Pro	Cys	Ala	Glu 435
Ile	Ala	Gly	Ala	Ala 440	Val	Ser	Glu	Ile	Ser 445	Gly	Pro	Phe	Ser	Thr 450
Glu	Asp	Val	Ala	Ser 455	Asn	Cys	Val	Pro	Ala 460	Gln	Ser	Leu	Ser	Glu 465
Pro	Ile	Leu	Trp	Ile 470	Val	Ser	Tyr	Ala	Leu 475	Met	Ser	Val	Cys	Gly 480
Ala	Ile	Leu	Leu	Val 485	Leu	Ile	Val	Leu	Leu 490	Leu	Leu	Pro	Phe	Arg 495
Cys	Gln	Arg	Arg	Pro 500	Arg	Asp	Pro	Glu	Val 505	Val	Asn	Asp	Glu	Ser 510
Ser	Leu	Val	Arg	His 515	Arg	Trp	Lys							
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     <220>
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    <210> 201
    <211> 18
     <212> DNA
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    <220>
    <223> Synthetic oligonucleotide probe
    <400> 201
     ggtcctgtgc ctggatgg 18
    <210> 202
    <211> 22
    <212> DNA
    <213> Artificial Sequence
    <223> Synthetic oligonucleotide probe
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    <400> 202
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Ф
⊨
    <210> 203
    <211> 24
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    <223> Synthetic oligonucleotide probe
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    <210> 204
    <211> 47
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    <210> 205
    <211> 1939
    <212> DNA
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Ser Gly Ile Gly Lys Met Thr Ala Leu Glu Leu Ala Arg Arg Gly
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Ala Arg Val Val Leu Ala Cys Arg Ser Gln Glu Arg Gly Glu Ala 65 70 75

Ala Ala Phe Asp Leu Arg Gln Glu Ser Gly Asn Asn Glu Val Ile 80 85 90

Phe Met Ala Leu Asp Leu Ala Ser Leu Ala Ser Val Arg Ala Phe 95 100 105

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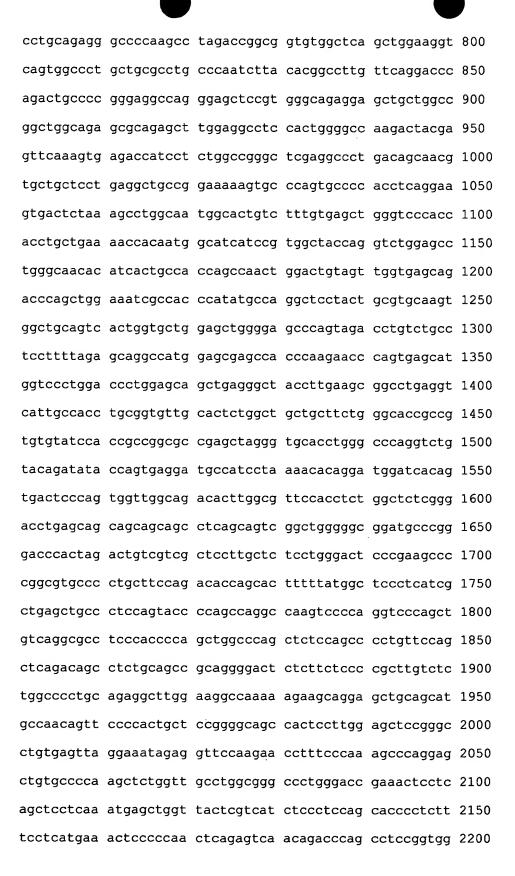
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Leu Ser

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35 40 45

Asn Gly Gln Pro Leu Ser Met Val Pro Pro Asp Pro His His Leu
50 55 60

Leu Pro Asp Gly Thr Leu Leu Leu Gln Pro Pro Ala Arg Gly
65 70 75

His Ala His Asp Gly Gln Ala Leu Ser Thr Asp Leu Gly Val Tyr 80 85 90

Thr Cys Glu Ala Ser Asn Arg Leu Gly Thr Ala Val Ser Arg Gly 95 100 105

Ala Arg Leu Ser Val Ala Val Leu Arg Glu Asp Phe Gln Ile Gln
110 115 120

Pro Arg Asp Met Val Ala Val Val Gly Glu Gln Phe Thr Leu Glu 125 130 135

Cys Gly Pro Pro Trp Gly His Pro Glu Pro Thr Val Ser Trp Trp
140 145 150

Lys Asp Gly Lys Pro Leu Ala Leu Gln Pro Gly Arg His Thr Val 155 160 165

Ser Gly Gly Ser Leu Leu Met Ala Arg Ala Glu Lys Ser Asp Glu 170 175 180

Gly Thr Tyr Met Cys Val Ala Thr Asn Ser Ala Gly His Arg Glu 185 190 195

Ser Arg Ala Ala Arg Val Ser Ile Gln Glu Pro Gln Asp Tyr Thr 200 205 210

Glu Pro Val Glu Leu Leu Ala Val Arg Ile Gln Leu Glu Asn Val 215 220 225

Thr Leu Leu Asn Pro Asp Pro Ala Glu Gly Pro Lys Pro Arg Pro 230 235 240

Ala Val Trp Leu Ser Trp Lys Val Ser Gly Pro Ala Ala Pro Ala Gln Ser Tyr Thr Ala Leu Phe Arg Thr Gln Thr Ala Pro Gly Gly 260 Gln Gly Ala Pro Trp Ala Glu Glu Leu Leu Ala Gly Trp Gln Ser Ala Glu Leu Gly Gly Leu His Trp Gly Gln Asp Tyr Glu Phe Lys Val Arg Pro Ser Ser Gly Arg Ala Arg Gly Pro Asp Ser Asn Val Leu Leu Leu Arg Leu Pro Glu Lys Val Pro Ser Ala Pro Pro Gln 320 330 Glu Val Thr Leu Lys Pro Gly Asn Gly Thr Val Phe Val Ser Trp 335 Val Pro Pro Pro Ala Glu Asn His Asn Gly Ile Ile Arg Gly Tyr 350 360 Gln Val Trp Ser Leu Gly Asn Thr Ser Leu Pro Pro Ala Asn Trp 365 Thr Val Val Gly Glu Gln Thr Gln Leu Glu Ile Ala Thr His Met 380 Pro Gly Ser Tyr Cys Val Gln Val Ala Ala Val Thr Gly Ala Gly Ala Gly Glu Pro Ser Arg Pro Val Cys Leu Leu Glu Gln Ala Met Glu Arg Ala Thr Gln Glu Pro Ser Glu His Gly Pro Trp Thr Leu Glu Gln Leu Arg Ala Thr Leu Lys Arg Pro Glu Val Ile Ala Thr Cys Gly Val Ala Leu Trp Leu Leu Leu Gly Thr Ala Val Cys Ile His Arg Arg Arg Ala Arg Val His Leu Gly Pro Gly Leu Tyr Arg Tyr Thr Ser Glu Asp Ala Ile Leu Lys His Arg Met Asp His Ser Asp Ser Gln Trp Leu Ala Asp Thr Trp Arg Ser Thr Ser Gly Ser Arg Asp Leu Ser Ser Ser Ser Ser Leu Ser Ser Arg Leu Gly Ala Asp Ala Arg Asp Pro Leu Asp Cys Arg Arg Ser Leu

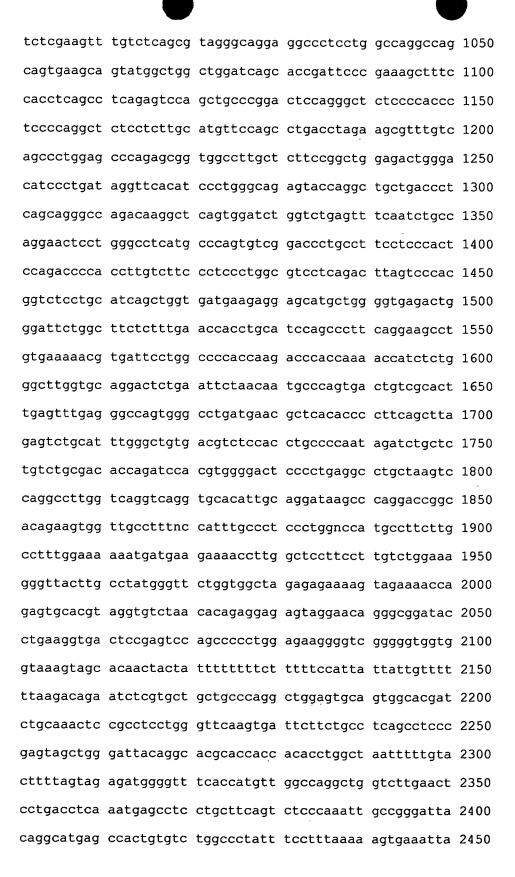
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Glu	Leu	Ser	Glu	Gly 785	Glu	Glu	Thr	Pro	Arg 790	Asn	Ser	Val	Ser	Pro 795
Met	Pro	Arg	Ala	Pro 800	Ser	Pro	Pro	Thr	Thr 805	Tyr	Gly	Tyr	Ile	Ser 810
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His Arg Lys Tyr Trp Cys Arg Lys Gly Gly Ile Leu Phe Ser Arg
50 55 60

Cys Ser Gly Thr Ile Tyr Ala Glu Glu Glu Glu Glu Glu Thr Met
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Lys Gly Arg Val Ser Ile Arg Asp Ser Arg Gln Glu Leu Ser Leu 80 85 90

Ile Val Thr Leu Trp Asn Leu Thr Leu Gln Asp Ala Gly Glu Tyr
95 100 105

Trp Cys Gly Val Glu Lys Arg Gly Pro Asp Glu Ser Leu Leu Ile 110 115 120

Ser Leu Phe Val Phe Pro Gly Pro Cys Cys Pro Pro Ser Pro Ser 125 130 135

Pro Thr Phe Gln Pro Leu Ala Thr Thr Arg Leu Gln Pro Lys Ala 140 145 150

Lys Ala Gln Gln Thr Gln Pro Pro Gly Leu Thr Ser Pro Gly Leu 155 160 165

Tyr Pro Ala Ala Thr Thr Ala Lys Gln Gly Lys Thr Gly Ala Glu 170 175 180

Ala Pro Pro Leu Pro Gly Thr Ser Gln Tyr Gly His Glu Arg Thr 185 190 195

Ser Gln Tyr Thr Gly Thr Ser Pro His Pro Ala Thr Ser Pro Pro

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Glu i	Ala	Pro	Ser	Gln 305	Ala	Pro	Glu	Gly	Asp 310	Val	Ile	Ser	Met	Pro 315
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Ser Glu Ala Lys Leu Tyr Gly Arg Cys Glu Leu Ala Arg Val Leu 20 25 30

His Asp Phe Gly Leu Asp Gly Tyr Arg Gly Tyr Ser Leu Ala Asp 40 Trp Val Cys Leu Ala Tyr Phe Thr Ser Gly Phe Asn Ala Ala Ala Leu Asp Tyr Glu Ala Asp Gly Ser Thr Asn Asn Gly Ile Phe Gln Ile Asn Ser Arg Arg Trp Cys Ser Asn Leu Thr Pro Asn Val Pro Asn Val Cys Arg Met Tyr Cys Ser Asp Leu Leu Asn Pro Asn Leu Lys Asp Thr Val Ile Cys Ala Met Lys Ile Thr Gln Glu Pro Gln 110 115 Gly Leu Gly Tyr Trp Glu Ala Trp Arg His His Cys Gln Gly Lys 135

Asp Leu Thr Glu Trp Val Asp Gly Cys Asp Phe 140

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<210> 226

<211> 351

<212> PRT

<213> Homo sapiens

<400> 226

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Leu Ser Ser Val Gly Ser Ile Ser Glu Glu Glu Thr Cys Glu Lys
35 40 40

Leu Lys Gly Leu Ile Gln Arg Gln Val Gln Met Cys Lys Arg Asn
50 55 60

Leu Glu Val Met Asp Ser Val Arg Arg Gly Ala Gln Leu Ala Ile 65 70 75

Glu Glu Cys Gln Tyr Gln Phe Arg Asn Arg Arg Trp Asn Cys Ser 80 85 90

Thr Leu Asp Ser Leu Pro Val Phe Gly Lys Val Val Thr Gln Gly
95 100 105

Thr Arg Glu Ala Ala Phe Val Tyr Ala Ile Ser Ser Ala Gly Val 110 115 120

Ala Phe Ala Val Thr Arg Ala Cys Ser Ser Gly Glu Leu Glu Lys Cys Gly Cys Asp Arg Thr Val His Gly Val Ser Pro Gln Gly Phe Gln Trp Ser Gly Cys Ser Asp Asn Ile Ala Tyr Gly Val Ala Phe Ser Gln Ser Phe Val Asp Val Arg Glu Arg Ser Lys Gly Ala Ser 170 Ser Ser Arg Ala Leu Met Asn Leu His Asn Asn Glu Ala Gly Arg Lys Ala Ile Leu Thr His Met Arg Val Glu Cys Lys Cys His Gly 210 Val Ser Gly Ser Cys Glu Val Lys Thr Cys Trp Arg Ala Val Pro Pro Phe Arg Gln Val Gly His Ala Leu Lys Glu Lys Phe Asp Gly 230 Ala Thr Glu Val Glu Pro Arg Arg Val Gly Ser Ser Arg Ala Leu Val Pro Arg Asn Ala Gln Phe Lys Pro His Thr Asp Glu Asp Leu 260 270 Val Tyr Leu Glu Pro Ser Pro Asp Phe Cys Glu Gln Asp Met Arg 275 Ser Gly Val Leu Gly Thr Arg Gly Arg Thr Cys Asn Lys Thr Ser 290 295 300 Lys Ala Ile Asp Gly Cys Glu Leu Leu Cys Cys Gly Arg Gly Phe 305 His Thr Ala Gln Val Glu Leu Ala Glu Arg Cys Ser Cys Lys Phe 320 325 His Trp Cys Cys Phe Val Lys Cys Arg Gln Cys Gln Arg Leu Val 335 340

Glu Leu His Thr Cys Arg 350

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<211> 23

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<223> Synthetic oligonucleotide probe

<400> 227

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 gctccgagga ggtccccgga gggccctggg gacgctgggt gcactggagc 150
 aggagacccc tcttcttggc cctggctgtc ctggtcacca cagtcctttg 200
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cgcaggcgaa gctgatggag caggagagcg ccctgcggga actgcgtgag 450
cgcgtgaccc agggcttggc tgaagccggc agggccgtg aggacgtccg 500
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tgccagcgcg cacctggtga tcgttggggg cctggatgag cagggcttcc 700
tcactcggaa cacgcgtggc cgtggttact ggctgggcct gagggctgtg 750
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<210> 231 <211> 293 <212> PRT <213> Homo sapiens

<400> 231

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Val Pro Gly Gly Pro Trp Gly Arg Trp Val His Trp Ser Arg Arg 20 25 30

Pro Leu Phe Leu Ala Leu Ala Val Leu Val Thr Thr Val Leu Trp
35 40 45

Ala Val Ile Leu Ser Ile Leu Leu Ser Lys Ala Ser Thr Glu Arg
50 55 60

Ala Ala Leu Leu Asp Gly His Asp Leu Leu Arg Thr Asn Ala Ser
65 70 75

Lys Gln Thr Ala Ala Leu Gly Ala Leu Lys Glu Glu Val Gly Asp 80 85 90

Cys His Ser Cys Cys Ser Gly Thr Gln Ala Gln Leu Gln Thr Thr 95 100

Arg Ala Glu Leu Gly Glu Ala Gln Ala Lys Leu Met Glu Glu 110 115 120

Ser Ala Leu Arg Glu Leu Arg Glu Arg Val Thr Gln Gly Leu Ala 125 130 135

<212> DNA

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<211> 1847
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<213> Homo sapiens
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ctcccacgtc ctatctgcct ctcgctggag gccaggccgt gcaqcatcqa 150
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ageggettea cetteteete ecceaaette gecaecatee egeaggaeae 900
ggtgaccgag ataacgtcct cctctcccag ccacccggcc aactccttct 950
actaccegeg getgaaggee etgeeteeca tegecagggt gacactgetg 1000
cggctgcgac agagccccag ggccttcatc cctcccqccc caqtcctqcc 1050
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<210> 236

<211> 331

<212> PRT

<213> Homo sapiens

<400> 236

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Ala Leu Leu Leu Ala Thr Leu Gly Ala Ala Gly Gln Pro Leu Gly 20 25 30

Gly Glu Ser Ile Cys Ser Ala Arg Ala Pro Ala Lys Tyr Ser Ile 35 40 45

Thr Phe Thr Gly Lys Trp Ser Gln Thr Ala Phe Pro Lys Gln Tyr
50 55 60

Pro Leu Phe Arg Pro Pro Ala Gln Trp Ser Ser Leu Leu Gly Ala 65 70 75

Ala His Ser Ser Asp Tyr Ser Met Trp Arg Lys Asn Gln Tyr Val 80 85 90

Ser Asn Gly Leu Arg Asp Phe Ala Glu Arg Gly Glu Ala Trp Ala 95 100 105

Leu Met Lys Glu Ile Glu Ala Ala Gly Glu Ala Leu Gln Ser Val

				110					115					120
His	Glu	Val	Phe	Ser 125	Ala	Pro	Ala	Val	Pro 130	Ser	Gly	Thr	Gly	Gln 135
Thr	Ser	Ala	Glu	Leu 140	Glu	Val	Gln	Arg	Arg 145	His	Ser	Leu	Val	Ser 150
Phe	Val	Val	Arg	Ile 155	Val	Pro	Ser	Pro	Asp 160	Trp	Phe	Val	Gly	Val 165
Asp	Ser	Leu	Asp	Leu 170	Суз	Asp	Gly	Asp	Arg 175	Trp	Arg	Glu	Gln	Ala 180
Ala	Leu	Asp	Leu	Tyr 185	Pro	Tyr	Asp	Ala	Gly 190	Thr	Asp	Ser	Gly	Phe 195
Thr	Phe	Ser	Ser	Pro 200	Asn	Phe	Ala	Thr	Ile 205	Pro	Gln	Asp	Thr	Val 210
Thr	Glu	Ile	Thr	Ser 215	Ser	Ser	Pro	Ser	His 220	Pro	Ala	Asn	Ser	Phe 225
Tyr	Tyr	Pro	Arg	Leu 230	Lys	Ala	Leu	Pro	Pro 235	Ile	Ala	Arg	Val	Thr 240
Leu	Leu	Arg	Leu	Arg 245	Gln	Ser	Pro	Arg	Ala 250	Phe	Ile	Pro	Pro	Ala 255
Pro	Val	Leu	Pro	Ser 260	Arg	Asp	Asn	Glu	Ile 265	Val	Asp	Ser	Ala	Ser 270
Val	Pro	Glu	Thr	Pro 275	Leu	Asp	Cys	Glu	Val 280	Ser	Leu	Trp	Ser	Ser 285
Trp	Gly	Leu	Cys	Gly 290	Gly	His	Cys	Gly	Arg 295	Leu	Gly	Thr	Lys	Ser 300
Arg	Thr	Arg	Tyr	Val 305	Arg	Val	Gln	Pro	Ala 310	Asn	Asn	Gly	Ser	Pro 315
Cys	Pro	Glu	Leu	Glu 320	Glu	Glu	Ala	Glu	Cys 325	Val	Pro	Asp	Asn	Cys 330
Val														
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romtor "tormor
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<400> 239
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ccagcgagag gcagatag 18
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<210> 243
<211> 42
<212> DNA
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<223> Synthetic oligonucleotide probe
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<210> 244
<211> 1894
<212> DNA
<213> Homo sapiens
<400> 244
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 tcatccccg taaggagcag agtcctttgt actgaccaag atgagcaaca 200
 tetacateca ggageeteee aegaatggga aggttttatt gaaaactaca 250
 gctggagata ttgacataga gttgtggtcc aaagaagctc ctaaagcttg 300
 cagaaatttt atccaacttt gtttggaagc ttattatgac aataccattt 350
 ttcatagagt tgtgcctggt ttcatagtcc aaggcggaga tcctactggc 400
 acagggagtg gtggagagtc tatctatgga gcgccattca aagatgaatt 450
 tcattcacgg ttgcgtttta atcggagagg actggttgcc atggcaaatg 500
 ctggttctca tgataatggc agccagtttt tcttcacact gggtcgagca 550
 gatgaactta acaataagca taccatcttt ggaaaggtta caggggatac 600
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 atgcaccaga tttagttgat gatggagaag atgaaagtgc agagcatgat 1000
 gaatatattg atggtgatga aaagaacctg atgagagaaa gaattgccaa 1050
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aaaattaaaa aaggacacaa gtgcgaatgt taaatcagct ggagaaggag 1100

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<210> 245

<211> 472

<212> PRT

<213> Homo sapiens

<400> 245

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Leu Leu Lys Thr Thr Ala Gly Asp Ile Asp Ile Glu Leu Trp Ser
20 25 30

Lys Glu Ala Pro Lys Ala Cys Arg Asn Phe Ile Gln Leu Cys Leu
35 40 45

Glu Ala Tyr Tyr Asp Asn Thr Ile Phe His Arg Val Val Pro Gly
50 55 60

Phe Ile Val Gln Gly Gly Asp Pro Thr Gly Thr Gly Ser Gly Gly
75

Glu Ser Ile Tyr Gly Ala Pro Phe Lys Asp Glu Phe His Ser Arg 80 85 90

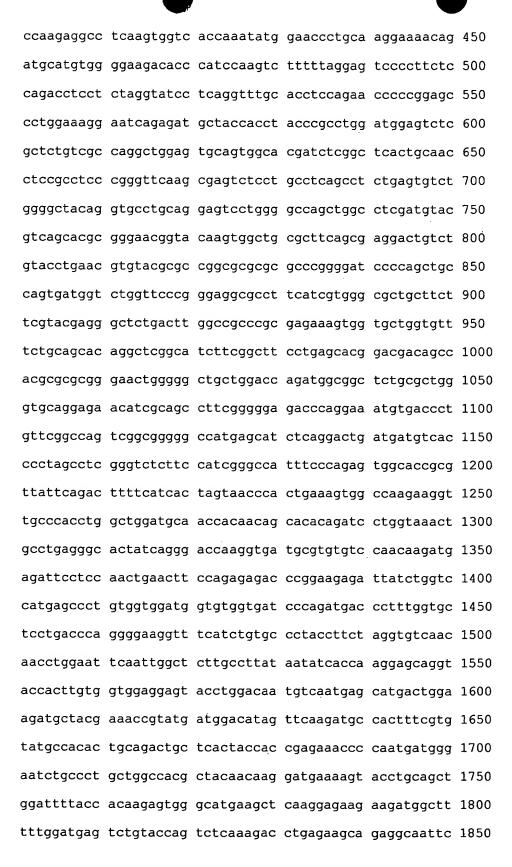
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Asp	Glu	Leu	Asn	Asn 125	Lys	His	Thr	Ile	Phe 130	Gly	Lys	Val	Thr	Gly 135
Asp	Thr	Val	Tyr	Asn 140	Met	Leu	Arg	Leu	Ser 145	Glu	Val	Asp	Ile	Asp 150
Asp	Asp	Glu	Arg	Pro 155	His	Asn	Pro	His	Lys 160	Ile	Lys	Ser	Cys	Glu 165
Val	Leu	Phe	Asn	Pro 170	Phe	Asp	Asp	Ile	Ile 175	Pro	Arg	Glu	Ile	Lys 180
Arg	Leu	Lys	Lys	Glu 185	Lys	Pro	Glu	Glu	Glu 190	Val	Lys	Lys	Leu	Lys 195
Pro	Lys	Gly	Thr	Lys 200	Asn	Phe	Ser	Leu	Leu 205	Ser	Phe	Gly	Glu	Glu 210
Ala	Glu	Glu	Glu	Glu 215	Glu	Glu	Val	Asn	Arg 220	Val	Ser	Gln	Ser	Met 225
Lys	Gly	Lys	Ser	Lys 230	Ser	Ser	His	Asp	Leu 235	Leu	Lys	Asp	Asp	Pro 240
His	Leu	Ser	Ser	Val 245	Pro	Val	Val	Glu	Ser 250	Glu	Lys	Gly	Asp	Ala 255
Pro	Asp	Leu	Val	Asp 260	Asp	Gly	Glu	Asp	Glu 265	Ser	Ala	Glu	His	Asp 270
Glu	Tyr	Ile	Asp	Gly 275	Asp	Glu	Lys	Asn	Leu 280	Met	Arg	Glu	Arg	Ile 285
Ala	Lys	Lys	Leu	Lys 290	Lys	Asp	Thr	Ser	Ala 295	Asn	Val	Lys	Ser	Ala 300
Gly	Glu	Gly	Glu	Val 305	Glu	Lys	Lys	Ser	Val 310	Ser	Arg	Ser	Glu	Glu 315
Leu	Arg	Lys	Glu	Ala 320	Arg	Gln	Leu	Lys	Arg 325	Glu	Leu	Leu	Ala	Ala 330
Lys	Gln	Lys	Lys	Val 335	Glu	Asn	Ala	Ala	Lys 340	Gln	Ala	Glu	Lys	Arg 345
Ser	Glu	Glu	Glu	Glu 350	Ala	Pro	Pro	Asp	Gly 355	Ala	Val	Ala	Glu	Tyr 360
Arg	Arg	Glu	Lys	Gln 365	Lys	Tyr	Glu	Ala	Leu 370	Arg	Lys	Gln	Gln	Ser 375
Lys	Lys	Gly	Thr	Ser 380	Arg	Glu	Asp	Gln	Thr 385	Leu	Ala	Leu	Leu	Asn 390
Gln	Phe	Lys	Ser	Lys	Leu	Thr	Gln	Ala	Ile	Ala	Glu	Thr	Pro	Glu

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TOTIOL LOITOY
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400 405 Asn Asp Ile Pro Glu Thr Glu Val Glu Asp Asp Glu Gly Trp Met Ser His Val Leu Gln Phe Glu Asp Lys Ser Arg Lys Val Lys Asp 425 Ala Ser Met Gln Asp Ser Asp Thr Phe Glu Ile Tyr Asp Pro Arg Asn Pro Val Asn Lys Arg Arg Glu Glu Ser Lys Lys Leu Met Arg Glu Lys Lys Glu Arg Arg <210> 246 <211> 24 <212> DNA <213> Artificial Sequence <220> <223> Synthetic oligonucleotide probe <400> 246 tgcggagatc ctactggcac aggg 24 <210> 247 <211> 18 <212> DNA <213> Artificial Sequence <223> Synthetic oligonucleotide probe <400> 247 cgagttagtc agagcatg 18 <210> 248 <211> 18 <212> DNA <213> Artificial Sequence <220> <223> Synthetic oligonucleotide probe <400> 248 cagatggtgc tgttgccg 18 <210> 249 <211> 29 <212> DNA <213> Artificial Sequence <223> Synthetic oligonucleotide probe

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 cttctgtggg gctcaatttt ggaaatcttg gaagtacttc aactccagca 300
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<210> 254

<211> 545

<212> PRT

<213> Homo sapiens

<400> 254

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Gly Thr Gly Thr Ser Ser Asn Pro Ser Val Gly Leu Asn Phe Gly
35 40 45

Asn Leu Gly Ser Thr Ser Thr Pro Ala Thr Thr Ser Ala Pro Ser 50 55 60

Ser Gly Phe Gly Thr Gly Leu Phe Gly Ser Lys Pro Ala Thr Gly
65 70 75

Phe Thr Leu Gly Gly Thr Asn Thr Gly Ala Leu His Thr Lys Arg 80 85 90

Pro Gln Val Val Thr Lys Tyr Gly Thr Leu Gln Gly Lys Gln Met 95 100 105

His Val Gly Lys Thr Pro Ile Gln Val Phe Leu Gly Val Pro Phe 110 115 120

Ser Arg Pro Pro Leu Gly Ile Leu Arg Phe Ala Pro Pro Glu Pro 125 130 135

Pro Glu Pro Trp Lys Gly Ile Arg Asp Ala Thr Thr Tyr Pro Pro Gly Trp Ser Leu Ala Leu Ser Pro Gly Trp Ser Ala Val Ala Arg 160 Ser Arg Leu Thr Ala Thr Ser Ala Ser Arg Val Gln Ala Ser Leu Leu Pro Gln Pro Leu Ser Val Trp Gly Tyr Arg Cys Leu Gln Glu 185 190 Ser Trp Gly Gln Leu Ala Ser Met Tyr Val Ser Thr Arg Glu Arg Tyr Lys Trp Leu Arg Phe Ser Glu Asp Cys Leu Tyr Leu Asn Val Tyr Ala Pro Ala Arg Ala Pro Gly Asp Pro Gln Leu Pro Val Met Val Trp Phe Pro Gly Gly Ala Phe Ile Val Gly Ala Ala Ser Ser Tyr Glu Gly Ser Asp Leu Ala Ala Arg Glu Lys Val Val Leu Val Phe Leu Gln His Arg Leu Gly Ile Phe Gly Phe Leu Ser Thr Asp Asp Ser His Ala Arg Gly Asn Trp Gly Leu Leu Asp Gln Met Ala Ala Leu Arg Trp Val Gln Glu Asn Ile Ala Ala Phe Gly Gly Asp Pro Gly Asn Val Thr Leu Phe Gly Gln Ser Ala Gly Ala Met Ser Ile Ser Gly Leu Met Met Ser Pro Leu Ala Ser Gly Leu Phe His Arg Ala Ile Ser Gln Ser Gly Thr Ala Leu Phe Arg Leu Phe Ile Thr Ser Asn Pro Leu Lys Val Ala Lys Lys Val Ala His Leu Ala Gly Cys Asn His Asn Ser Thr Gln Ile Leu Val Asn Cys Leu Arg Ala Leu Ser Gly Thr Lys Val Met Arg Val Ser Asn Lys Met Arg Phe Leu Gln Leu Asn Phe Gln Arg Asp Pro Glu Glu Ile Ile Trp 410 420 Ser Met Ser Pro Val Val Asp Gly Val Val Ile Pro Asp Asp Pro

				425					430					435
Leu	Val	Leu	Leu	Thr 440	Gln	Gly	Lys	Val	Ser 445	Ser	Val	Pro	Tyr	Leu 450
Leu	Gly	Val	Asn	Asn 455	Leu	Glu	Phe	Asn	Trp 460	Leu	Leu	Pro	Tyr	Asn 465
Ile	Thr	Lys	Glu	Gln 470	Val	Pro	Leu	Val	Val 475	Glu	Glu	Tyr	Leu	Asp 480
Asn	Val	Asn	Glu	His 485	Asp	Trp	Lys	Met	Leu 490	Arg	Asn	Arg	Met	Met 495
Asp	Ile	Val	Gln	Asp 500	Ala	Thr	Phe	Val	Tyr 505	Ala	Thr	Leu	Gln	Thr 510
Ala	His	Tyr	His	Arg 515	Glu	Thr	Pro	Met	Met 520	Gly	Ile	Суз	Pro	Ala 525
Gly	His	Ala	Thr	Thr 530	Arg	Met	Lys	Ser	Thr 535	Cys	Ser	Trp	Ile	Leu 540
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- <213> Homo sapiens

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<211> 544

<212> PRT

<213> Homo sapiens

<400> 259

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Pro Arg Gln Asp Trp Thr Gly Ser Thr Pro Ala Tyr Gly Tyr Trp
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Phe Lys Ala Val Thr Glu Thr Thr Lys Gly Ala Pro Val Ala Thr
65 70 75

Asn His Gln Ser Arg Glu Val Glu Met Ser Thr Arg Gly Arg Phe 80 85 90

Gln Leu Thr Gly Asp Pro Ala Lys Gly Asn Cys Ser Leu Val Ile 95 100 105

Arg Asp Ala Gln Met Gln Asp Glu Ser Gln Tyr Phe Phe Arg Val 110 115 120

Glu Arg Gly Ser Tyr Val Thr Tyr Asn Phe Met Asn Asp Gly Phe 125 130 135

Phe Leu Lys Val Thr Val Leu Ser Phe Thr Pro Arg Pro Gln Asp 140 145 150

His Asn Thr Asp Leu Thr Cys His Val Asp Phe Ser Arg Lys Gly 155 160 165

Val Ser Ala Gln Arg Thr Val Arg Leu Arg Val Ala Tyr Ala Pro 170 175 180

Arg Asp Leu Val Ile Ser Ile Ser Arg Asp Asn Thr Pro Ala Leu 185 190 195

Glu Pro Gln Pro Gln Gly Asn Val Pro Tyr Leu Glu Ala Gln Lys 200 205 210

Gly Gln Phe Leu Arg Leu Leu Cys Ala Ala Asp Ser Gln Pro Pro 215 220 225

Ala Thr Leu Ser Trp Val Leu Gln Asn Arg Val Leu Ser Ser Ser 230 235 240

His Pro Trp Gly Pro Arg Pro Leu Gly Leu Glu Leu Pro Gly Val 245 250 255

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Pro	Glu	Asn	Leu	Arg 290	Val	Met	Val	Ser	Gln 295	Ala	Asn	Arg	Thr	Val 300
Leu	Glu	Asn	Leu	Gly 305	Asn	Gly	Thr	Ser	Leu 310	Pro	Val	Leu	Glu	Gly 315
Gln	Ser	Leu	Cys	Leu 320	Val	Cys	Val	Thr	His 325	Ser	Ser	Pro	Pro	Ala 330
Arg	Leu	Ser	Trp	Thr 335	Gln	Arg	Gly	Gln	Val 340	Leu	Ser	Pro	Ser	Gln 345
Pro	Ser	Asp	Pro	Gly 350	Val	Leu	Glu	Leu	Pro 355	Arg	Val	Gln	Val	Glu 360
His	Glu	Gly	Glu	Phe 365	Thr	Суз	His	Ala	Arg 370	His	Pro	Leu	Gly	Ser 375
Gln	His	Val	Ser	Leu 380	Ser	Leu	Ser	Val	His 385	Tyr	Lys	Lys	Gly	Leu 390
Ile	Ser	Thr	Ala	Phe 395	Ser	Asn	Gly	Ala	Phe 400	Leu	Gly	Ile	Gly	Ile 405
Thr	Ala	Leu	Leu	Phe 410	Leu	Суѕ	Leu	Ala	Leu 415	Ile	Ile	Met	Lys	Ile 420
Leu	Pro	Lys	Arg	Arg 425	Thr	Gln	Thr	Glu	Thr 430	Pro	Arg	Pro	Arg	Phe 435
Ser	Arg	His	Ser	Thr 440	Ile	Leu	Asp	Tyr	Ile 445	Asn	Val	Val	Pro	Thr 450
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Ser	Pro	Arg	Thr	Pro 470	Pro	Pro	Pro	Gly	Ala 475	Pro	Ser	Pro	Glu	Ser 480
Lys	Lys	Asn	Gln	Lys 485	Lys	Gln	Tyr	Gln	Leu 490	Pro	Ser	Phe	Pro	Glu 495
Pro	Lys	Ser	Ser	Thr 500	Gln	Ala	Pro	Glu	Ser 505	Gln	Glu	Ser	Gln	Glu 510
Glu	Leu	His	Tyr	Ala 515	Thr	Leu	Asn	Phe	Pro 520	Gly	Val	Arg	Pro	Arg 525
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 aatgaatacg actagtcatc acatcggcca gctaagatct gatttagaca 250
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<211> 772

<212> PRT

<213> Homo sapiens

<400> 264

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20 25 30

Val Lys Gln Pro Val Arg Ser His Leu Arg Val Lys Arg Gly Trp 35 40 45

Val Trp Asn Gln Phe Phe Val Pro Glu Glu Met Asn Thr Thr Ser 50 55 60

His His Ile Gly Gln Leu Arg Ser Asp Leu Asp Asn Gly Asn Asn Ser Phe Gln Tyr Lys Leu Leu Gly Ala Gly Ala Gly Ser Thr Phe Ile Ile Asp Glu Arg Thr Gly Asp Ile Tyr Ala Ile Gln Lys Leu Asp Arg Glu Glu Arg Ser Leu Tyr Ile Leu Arg Ala Gln Val Ile Asp Ile Ala Thr Gly Arg Ala Val Glu Pro Glu Ser Glu Phe Val Ile Lys Val Ser Asp Ile Asn Asp Asn Glu Pro Lys Phe Leu Asp Glu Pro Tyr Glu Ala Ile Val Pro Glu Met Ser Pro Glu Gly Thr Leu Val Ile Gln Val Thr Ala Ser Asp Ala Asp Asp Pro Ser Ser 170 175 Gly Asn Asn Ala Arg Leu Leu Tyr Ser Leu Leu Gln Gly Gln Pro Tyr Phe Ser Val Glu Pro Thr Thr Gly Val Ile Arg Ile Ser Ser 200 Lys Met Asp Arg Glu Leu Gln Asp Glu Tyr Trp Val Ile Ile Gln Ala Lys Asp Met Ile Gly Gln Pro Gly Ala Leu Ser Gly Thr Thr 230 Ser Val Leu Ile Lys Leu Ser Asp Val Asn Asp Asn Lys Pro Ile Phe Lys Glu Ser Leu Tyr Arg Leu Thr Val Ser Glu Ser Ala Pro Thr Gly Thr Ser Ile Gly Thr Ile Met Ala Tyr Asp Asn Asp Ile Gly Glu Asn Ala Glu Met Asp Tyr Ser Ile Glu Glu Asp Asp Ser Gln Thr Phe Asp Ile Ile Thr Asn His Glu Thr Gln Glu Gly Ile Val Ile Leu Lys Lys Lys Val Asp Phe Glu His Gln Asn His Tyr Gly Ile Arg Ala Lys Val Lys Asn His His Val Pro Glu Gln Leu Met Lys Tyr His Thr Glu Ala Ser Thr Thr Phe Ile Lys Ile Gln

				350					355					360
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Val	Phe	Glu	Val	Phe 380	Glu	Glu	Thr	Pro	Gln 385	Gly	Ser	Phe	Val	Gly 390
Val	Val	Ser	Ala	Thr 395	Asp	Pro	Asp	Asn	Arg 400		Ser	Pro	Ile	Arg 405
Tyr	Ser	Ile	Thr	Arg 410	Ser	Lys	Val	Phe	Asn 415	Ile	Asn	Asp	Asn	Gly 420
Thr	Ile	Thr	Thr	Ser 425	Asn	Ser	Leu	Asp	Arg 430	Glu	Ile	Ser	Ala	Trp 435
Tyr	Asn	Leu	Ser	Ile 440	Thr	Ala	Thr	Glu	Lys 445	Tyr	Asn	Ile	Glu	Gln 450
Ile	Ser	Ser	Ile	Pro 455	Leu	Tyr	Val	Gln	Val 460	Leu	Asn	Ile	Asn	Asp 465
His	Ala	Pro	Glu	Phe 470	Ser	Gln	Tyr	Tyr	Glu 475	Thr	Tyr	Val	Cys	Glu 480
Asn	Ala	Gly	Ser	Gly 485	Gln	Val	Ile	Gln	Thr 490	Ile	Ser	Ala	Val	Asp 495
Arg	Asp	Glu	Ser	Ile 500	Glu	Glu	His	His	Phe 505	Tyr	Phe	Asn	Leu	Ser 510
Val	Glu	Asp	Thr	Asn 515	Asn	Ser	Ser	Phe	Thr 520	Ile	Ile	Asp	Asn	Gln 525
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Gln	Glu	Glu	Pro	Val 545	Phe	Tyr	Ile	Ser	Ile 550	Leu	Ile	Ala	Asp	Asn 555
Gly	Ile	Pro	Ser	Leu 560	Thr	Ser	Thr	Asn	Thr 565	Leu	Thr	Ile	His	Val 570
Cys	Asp	Cys	Gly	Asp 575	Ser	Gly	Ser	Thr	Gln 580	Thr	Cys	Gln	Tyr	Gln 585
Glu	Leu	Val	Leu	Ser 590	Met	Gly	Phe	Lys	Thr 595	Glu	Val	Ile	Ile	Ala 600
Ile	Leu	Ile	Суѕ	Ile 605	Met	Ile	Ile <sub>.</sub>	Phe	Gly 610	Phe	Ile	Phe	Leu	Thr 615
Leu	Gly	Leu	Lys	Gln 620	Arg	Arg	Lys	Gln	Ile 625	Leu	Phe	Pro	Glu	Lys 630
Ser	Glu	Asp	Phe	Arg 635	Glu	Asn	Ile	Phe	Gln 640	Tyr	Asp	Asp	Glu	Gly 645

Gly Gly Glu Glu Asp Thr Glu Ala Phe Asp Ile Ala Glu Leu Arg 660
Ser Ser Thr Ile Met Arg Glu Arg Lys Thr Arg Lys Thr Thr Ser 675
Ala Glu Ile Arg Ser Leu Tyr Arg Gln Ser Leu Gln Val Gly Pro 680
Asp Ser Ala Ile Phe Arg Lys Phe Ile Leu Glu Lys Leu Glu Glu Glu Arg Arg Arg Arg Dro Cys Ala Pro Pro Phe Asp Ser Leu Gln Thr 720
Tyr Ala Phe Glu Gly Thr Gly Ser Leu Ala Gly Ser Leu Gln Tyr Asp Tyr Leu Glu Glu Ser Ala Val Ser Asp Gln Asp Glu Ser Tyr Asp Tyr Leu 750
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Ser Ala Val Gln Ser Asn Asn 770

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- <211> 349
- <212> DNA
- <213> Homo sapiens
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- <221> unsure
- <222> 24, 60, 141, 226, 228, 249, 252
- <223> unknown base
- <400> 265

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- <212> DNA
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 gcccacctgc aaactctccg ccttctgcac ctgccacccc tgagccagcg 200
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Met Tyr Glu Gly Leu Trp Met Ser Cys Val Ser Gln Ser Thr Gly
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Gln Ile Gln Cys Lys Val Phe Asp Ser Leu Leu Asn Leu Ser Ser 65 70 75

Thr Leu Gln Ala Thr Arg Ala Leu Met Val Val Gly Ile Leu Leu 80 85 90

Gly Val Ile Ala Ile Phe Val Ala Thr Val Gly Met Lys Cys Met
95 100 105

Lys Cys Leu Glu Asp Asp Glu Val Gln Lys Met Arg Met Ala Val 110  $\,$  115  $\,$  120

Ile Gly Gly Ala Ile Phe Leu Leu Ala Gly Leu Ala Ile Leu Val 125 130 135

Ala Thr Ala Trp Tyr Gly Asn Arg Ile Val Gln Glu Phe Tyr Asp 140 145 150

Pro Met Thr Pro Val Asn Ala Arg Tyr Glu Phe Gly Gln Ala Leu 155 160 165

Phe Thr Gly Trp Ala Ala Ala Ser Leu Cys Leu Leu Gly Gly Ala 170 175 180

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Ile Asp Ala Gly Ala Ser Ile Asn Val Ser Val Met Leu Gln Pro 65 70 75

Phe Asp Tyr Asp Pro Asn Glu Lys Ser Lys His Lys Phe Met Val 80 85 90

Gln Ser Met Phe Ala Pro Thr Asp Thr Ser Asp Met Glu Ala Val 95 100 105

Trp Lys Glu Ala Lys Pro Glu Asp Leu Met Asp Ser Lys Leu Arg 110 115 120

Cys Val Phe Glu Leu Pro Ala Glu Asn Asp Lys Pro His Asp Val 125 130 135

Glu Ile Asn Lys Ile Ile Ser Thr Thr Ala Ser Lys Thr Glu Thr 140 145 150

Pro Ile Val Ser Lys Ser Leu Ser Ser Ser Leu Asp Asp Thr Glu
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Val Lys Lys Val Met Glu Glu Cys Lys Arg Leu Gln Gly Glu Val 170 175 180

Gln Arg Leu Arg Glu Glu Asn Lys Gln Phe Lys Glu Glu Asp Gly 185 190 195

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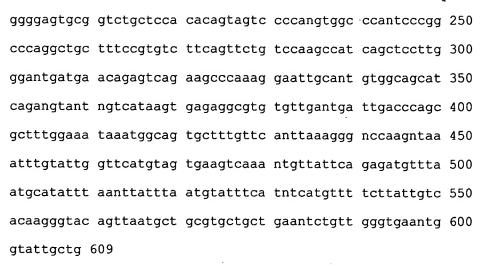
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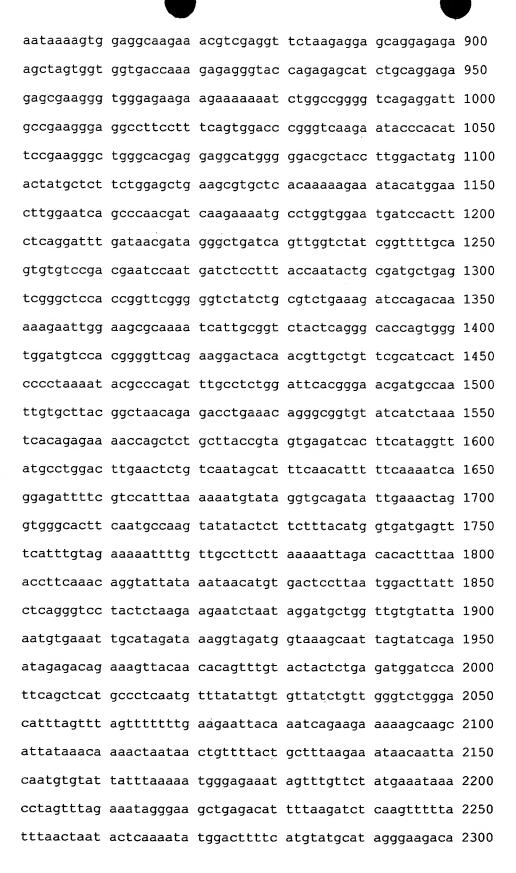
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Ser Glu Leu Glu Asp Tyr Leu Ser Tyr Glu Thr Val Phe Glu Asn 80 85 90

Gly Thr Arg Thr Leu Thr Arg Val Lys Val Gln Asp Leu Val Leu 95 100 105

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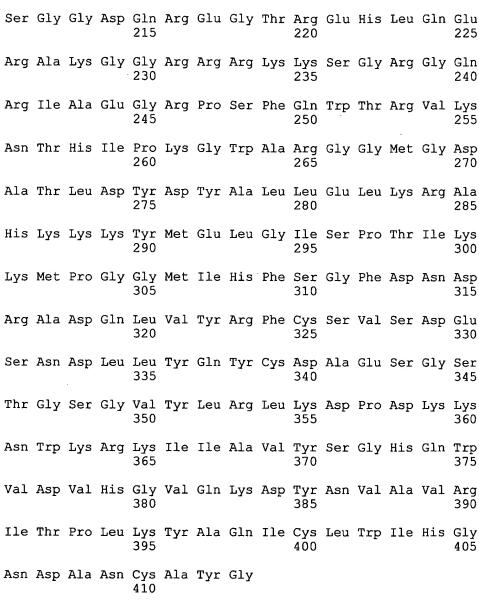
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<211> 525

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<213> Homo sapiens

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50 55 60

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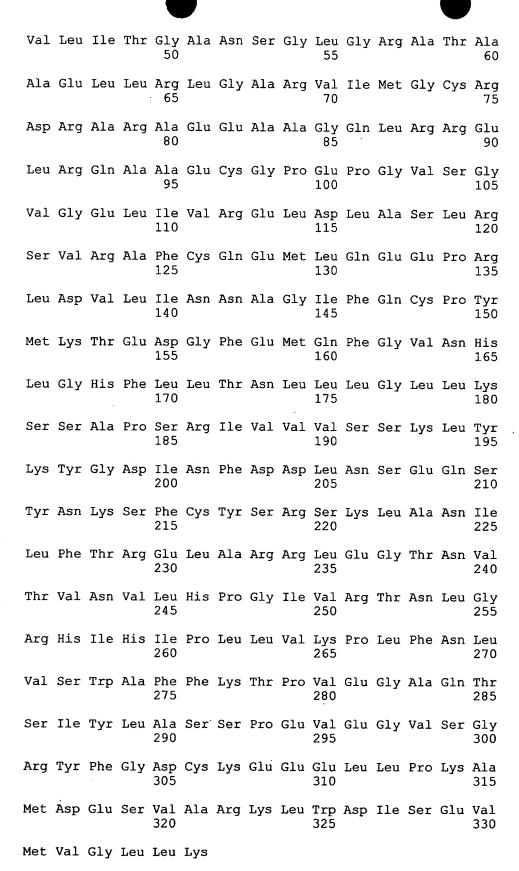
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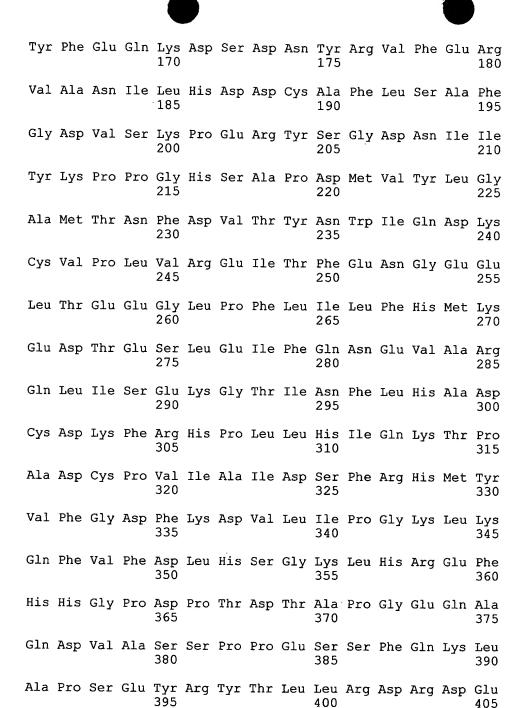
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125
130

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    <223> Synthetic oligonucleotide probe
    <400> 315
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    <210> 316
    <211> 19
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    <223> Synthetic oligonucleotide probe
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     ggtgctatag gccaaggg 18
    <210> 318
    <211> 24
    <212> DNA
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<400> 319
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<210> 320
<211> 46
<212> DNA
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<400> 320
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 tttttttact acctatatgg catgatctat gttttggtga gctcttagaa 450
 caacacacag aagaattggt ccagttaagt gcatgcaaaa agccaccaaa 500
 tgaagggatt ctatccagca agatcctgtc caagagtagc ctgtggaatc 550
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<211> 144

<212> PRT

<213> Homo sapiens

<400> 322

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Leu Thr Ala Ala Leu Ile Phe Phe Ala Ile Trp His Ile Ile Ala 20 25 30

Phe Asp Glu Leu Lys Thr Asp Tyr Lys Asn Pro Ile Asp Gln Cys 35 40 45

Asn Thr Leu Asn Pro Leu Val Leu Pro Glu Tyr Leu Ile His Ala 50 55 60

Phe Phe Cys Val Met Phe Leu Cys Ala Ala Glu Trp Leu Thr Leu 65 70 75

Gly Leu Asn Met Pro Leu Leu Ala Tyr His Ile Trp Arg Tyr Met 80 85 90

Ser Arg Pro Val Met Ser Gly Pro Gly Leu Tyr Asp Pro Thr Thr 95 100 105

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Ile Met Asn Ala Asp Ile Leu Ala Tyr Cys Gln Lys Glu Gly Trp
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                                                          135
 Gly Met Ile Tyr Val Leu Val Ser Ser
                 140
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<213> Homo sapiens
<400> 323
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 atgagtggcc caggactcta tgaccctaca accatcatga atgcagatat 250
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 tagcattttt ttactaccta tatggcatga tctatgtttt ggtgagctct 350
 tagaacaaca cacagaagaa ttggtccagt taagtgcatg caaaaagcca 400
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<211> 45
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<400> 328
gatattctag catattgtca gaaggaagga tggtgcaaat tagct 45
<210> 329
<211> 1174
<212> DNA
<213> Homo sapiens
<400> 329
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ggacccaact ggggctcccg ccgctgctgc tgctgaccat ggccttggcc 150
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caagaacaac ttatgtccct gatgccaaaa atgcacctac tctttcctct 500
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<210> 330

<211> 323

<212> PRT

<213> Homo sapiens

<400> 330

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Gly Thr Ala Ser Ala Glu Ala Phe Asp Ser Val Leu Gly Asp Thr 35 40 45

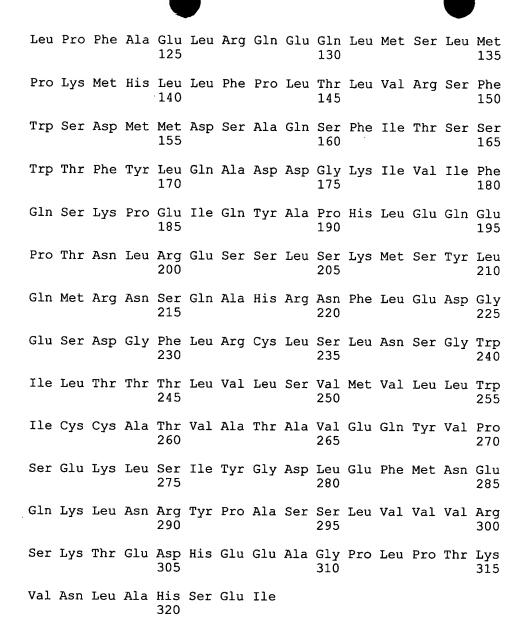
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Tyr Pro Lys Glu Glu Glu Leu Tyr Ala Cys Gln Arg Gly Cys Arg
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Leu Phe Ser Ile Cys Gln Phe Val Asp Asp Gly Ile Asp Leu Asn 80 85

Arg Thr Lys Leu Glu Cys Glu Ser Ala Cys Thr Glu Ala Tyr Ser

Gln Ser Asp Glu Gln Tyr Ala Cys His Leu Gly Cys Gln Asn Gln 110 115 120



<210> 331

<211> 351

<212> DNA

<213> Homo sapiens

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<211> 562
<212> DNA
<213> Homo sapiens
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<222> 47
<223> unknown base
<400> 332
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 cgaagggagc ctttgggtga ggacccaact ggggctcccg ccgctgctgc 150
 tgctgaccat ggccttggcc ggaggttcgg ggaccgcttc ggctgaagca 200
 tttgactcgg tcttgggtga tacggcgtct tgccaccggg cctgtcagtt 250
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 ttcccaatct gatgagcaat atgcttgcca tcttggttgc cagaatcagc 450
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<213> Artificial Sequence
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<<223> Synthetic oligonucleotide probe
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<210> 334
<211> 22
<212> DNA
<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe

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<213> Homo sapiens
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ctcattgaag aatgtgaaca agctgaacga cttggagcag tggatgaatc 600
tctgagtgag gaaacacaga aggctgttct tcagtggacc aagcatgatg 650
attcttcaga taacttctgt gaagctgatg acattcagtc ccctgaagct 700
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aaaaagagca ttctacagac ttatatctgg cctacatgca agcattaatg 950
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<210> 337

<211> 468

<212> PRT

<213> Homo sapiens

<400> 337

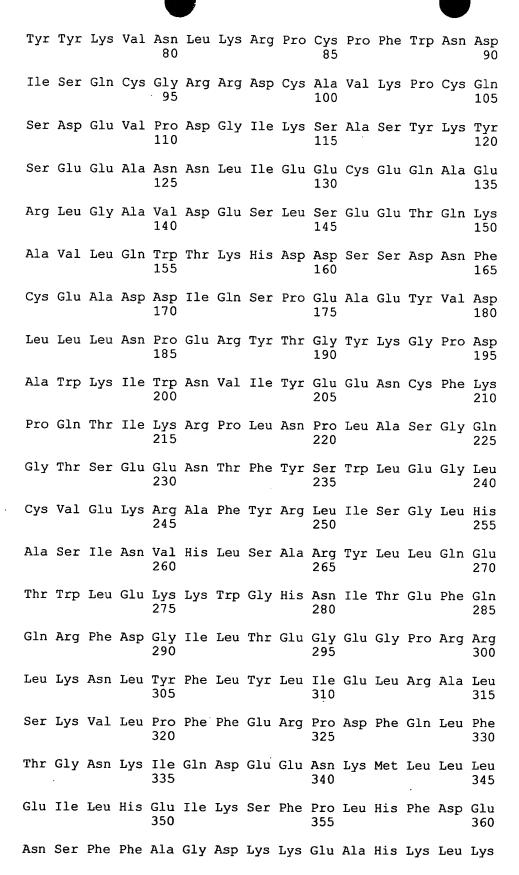
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Trp Leu Leu Ser Ser Gly His Gly Glu Glu Gln Pro Pro Glu Thr
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Ala Ala Gln Arg Cys Phe Cys Gln Val Ser Gly Tyr Leu Asp Asp 35 40 45

Cys Thr Cys Asp Val Glu Thr Ile Asp Arg Phe Asn Asn Tyr Arg
50 55 60

Leu Phe Pro Arg Leu Gln Lys Leu Leu Glu Ser Asp Tyr Phe Arg
65 70 75



	365	370	375
Glu Asp Phe Arg	Leu His Phe 380	Arg Asn Ile Ser Ar 385	g Ile Met Asp 390
Cys Val Gly Cys	Phe Lys Cys 395	Arg Leu Trp Gly Ly 400	s Leu Gln Thr 405
Gln Gly Leu Gly	Thr Ala Leu 410	Lys Ile Leu Phe Se 415	r Glu Lys Leu 420
Ile Ala Asn Met	Pro Glu Ser 425	Gly Pro Ser Tyr Gl	u Phe His Leu 435
Thr Arg Gln Glu	Ile Val Ser 440	Leu Phe Asn Ala Ph	e Gly Arg Ile 450
Ser Thr Ser Val	Lys Glu Leu 455	Glu Asn Phe Arg Ass 460	n Leu Leu Gln 465
Asn Ile His			

- <210> 338
- <211> 507
- <212> DNA
- <213> Homo sapiens
- <220>
- <221> unsure
- <222> 101, 263, 376, 397, 426
- <223> unknown base
- <400> 338

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<210> 339

<211> 20

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<210> 340
<211> 21
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<223> Synthetic oligonucleotide probe
<400> 340
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<210> 341
<211> 20
<212> DNA
<213> Artificial Sequence
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<210> 342
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<212> DNA
<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
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<211> 1486
<212> DNA
<213> Homo sapiens
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<210> 346

<211> 124

<212> PRT

<213> Homo sapiens

<400> 346

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Leu Thr Gly Leu Cys Ser Pro Phe Asn Leu Asp Glu His His Pro
20 25 30

Arg Leu Phe Pro Gly Pro Pro Glu Ala Glu Phe Gly Tyr Ser Val 35 40 45

Leu Gln His Val Gly Gly Gln Arg Trp Met Leu Val Gly Ala 50 55 60

Pro Trp Asp Gly Pro Ser Gly Asp Arg Arg Gly Asp Val Tyr Arg 65 70 75

Cys Pro Val Gly Gly Ala His Asn Ala Pro Cys Ala Lys Gly His 80 85 90

Leu Gly Asp Tyr Gln Leu Gly Asn Ser Ser His Pro Ala Val Asn 95 100 105

Met His Leu Gly Met Ser Leu Leu Glu Thr Asp Gly Asp Gly Gly 110 115 120

Phe Met Val Ser

<210> 347

<211> 509

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 22

<223> unknown base

<400> 347

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- <220>
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- <210> 349
- <211> 24
- <212> DNA
- <213> Artificial Sequence
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- <223> Synthetic oligonucleotide probe
- <400> 349
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- <210> 350
- <211> 45
- <212> DNA
- <213> Artificial Sequence
- <220>
- <223> Synthetic oligonucleotide probe
- <400> 350
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- <210> 351
- <211> 2056
- <212> DNA

## <213> Homo sapiens

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<211> 311

<212> PRT

<213> Homo sapiens

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Phe Met Trp Phe Phe Tyr Ala Leu Ile Pro Cys Leu Leu Thr Asp 20 25 30

Glu Val Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser
35 40 45

Thr Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro 50 55 60

Gly Glu Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu
65 70 75

Ser Leu Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser 80 85 90

Leu Thr Glu Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala 95 100 105

Thr Val Pro Tyr Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln
110 115 120

Thr	Ser	Ala	Trp	Ser 125	Ile	Leu	Lys	His	Pro 130	Phe	Asn	Arg	Asn	Ser 135
Thr	Ile	Leu	Thr	Arg 140	Pro	Gly	Met	Glu	Ile 145	Thr	Lys	Asp	Gly	Phe 150
His	Leu	Val	Ile	Glu 155	Leu	Glu	Asp	Leu	Gly 160	Pro	Gln	Phe	Glu	Phe 165
Leu	Val	Ala	Tyr	Trp 170	Arg	Arg	Glu	Pro	Gly 175	Ala	Glu	Glu	His	Val 180
Lys	Met	Val	Arg	Ser 185	Gly	Gly	Ile	Pro	Val 190	His	Leu	Glu	Thr	Met 195
Glu	Pro	Gly	Ala	Ala 200	Tyr	Суз	۷al	Lys	Ala 205	Gln	Thr	Phe	Val	Lys 210
Ala	Ile	Gly	Arg	Tyr 215	Ser	Ala	Phe	Ser	Gln 220	Thr	Glu	Cys	Val	Glu 225
Val	Gln	Gly	Glu	Ala 230	Ile	Pro	Leu	Val	Leu 235	Ala	Leu	Phe	Ala	Phe 240
Val	Gly	Phe	Met	Leu 245	Ile	Leu	Val	Val	Val 250	Pro	Leu	Phe	Val	Trp 255
Lys	Met	Gly	Arg	Leu 260	Leu	Gln	Tyr	Ser	Cys 265	Cys	Pro	Val	Val	Val 270
Leu	Pro	Asp	Thr	Leu 275	Lys	Ile	Thr	Asn	Ser 280	Pro	Gln	Lys	Leu	Ile 285
Ser	Суѕ	Arg	Arg	Glu 290	Glu	Val	Asp	Ala	Cys 295	Ala	Thr	Ala	Val	Met 300
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<213> Homo sapiens

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<223> unknown base

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<223> Synthetic oligonucleotide probe

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<212> DNA

<213> Homo sapiens

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<211> 328

<212> PRT

<213> Homo sapiens

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Trp Ala Ala Leu Gly Ala Ala Ala His Ile Gly Pro Ala Pro Asp 20 25 30

Pro Glu Asp Trp Trp Ser Tyr Lys Asp Asn Leu Gln Gly Asn Phe 35 40 45

Val Pro Gly Pro Pro Phe Trp Gly Leu Val Asn Ala Ala Trp Ser 50 55 60

Leu Cys Ala Val Gly Lys Arg Gln Ser Pro Val Asp Val Glu Leu
65 70 75

Lys Arg Val Leu Tyr Asp Pro Phe Leu Pro Pro Leu Arg Leu Ser 80 85 90

Thr Gly Gly Glu Lys Leu Arg Gly Thr Leu Tyr Asn Thr Gly Arg 95 100 105

His Val Ser Phe Leu Pro Ala Pro Arg Pro Val Val Asn Val Ser 110 115 120

Gly Gly Pro Leu Leu Tyr Ser His Arg Leu Ser Glu Leu Arg Leu 125 130 135

Leu Phe Gly Ala Arg Asp Gly Ala Gly Ser Glu His Gln Ile Asn 140 145 150

His Gln Gly Phe Ser Ala Glu Val Gln Leu Ile His Phe Asn Gln 155 160 165

Glu Leu Tyr Gly Asn Phe Ser Ala Ala Ser Arg Gly Pro Asn Gly

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Pro Phe Leu Ser	Arg Leu L	eu Asn Arg	Asp Thr Ile	Thr Arg Ile 210						
Ser Tyr Lys Asn	Asp Ala T	yr Phe Leu	Gln Asp Leu 220	Ser Leu Glu 225						
Leu Leu Phe Pro	Glu Ser Pl 230	he Gly Phe	Ile Thr Tyr 235	Gln Gly Ser 240						
Leu Ser Thr Pro	Pro Cys So 245	er Glu Thr	Val Thr Trp 250	Ile Leu Ile 255						
Asp Arg Ala Leu	Asn Ile Th	hr Ser Leu	Gln Met His 265	Ser Leu Arg 270						
Leu Leu Ser Gln	Asn Pro Pro 275	ro Ser Gln	Ile Phe Gln 280	Ser Leu Ser 285						
Gly Asn Ser Arg	Pro Leu G. 290	ln Pro Leu	Ala His Arg 295	Ala Leu Arg 300						
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<212> PRT

<213> Homo sapiens

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35 40 45

Trp Trp Ile Ala Lys Gln Arg Gly Lys Arg Ala Ile Thr Asp Asn
50 55 60

Asp Met Gln Ser Ile Leu Asp Leu His Asn Lys Leu Arg Ser Gln
65 70 75

Val Tyr Pro Thr Ala Ser Asn Met Glu Tyr Met Thr Trp Asp Val 80 85 90

Glu Leu Glu Arg Ser Ala Glu Ser Trp Ala Glu Ser Cys Leu Trp 95 100 105

Glu His Gly Pro Ala Ser Leu Leu Pro Ser Ile Gly Gln Asn Leu 110 115 120

Gly Ala His Trp Gly Arg Tyr Arg Pro Pro Thr Phe His Val Gln 125 130 135

Ser Trp Tyr Asp Glu Val Lys Asp Phe Ser Tyr Pro Tyr Glu His

Glu Cys Asn Pro Tyr Cys Pro Phe Arg Cys Ser Gly Pro Val Cys 155 160 165

Thr His Tyr Thr Gln Val Val Trp Ala Thr Ser Asn Arg Ile Gly

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Asn	Trp	Trp	Gly	His 215	Ala	Pro	Tyr	Lys	His 220	Gly	Arg	Pro	Суз	Ser 225
Ala	Cys	Pro	Pro	Ser 230	Phe	Gly	Gly	Gly	Cys 235	Arg	Glu	Asn	Leu	Cys 240
Tyr	Lys	Glu	Gly	Ser 245	Asp	Arg	Tyr	Tyr	Pro 250	Pro	Arg	Glu	Glu	Glu 255
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Val	Arg	Thr	Arg	Ser 275	Asp	Asp	Ser	Ser	Arg 280	Asn	Glu	Val	Ile	Ser 285
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Phe	His	Lys	Pro	Ala 410	Ser	His	Cys	Pro	Arg 415	Val	Tyr	Cys	Pro	Arg 420
Asn	Cys	Met	Gln	Ala 425	Asn	Pro	His	Tyr	Ala 430	Arg	Val	Ile	Gly	Thr 435
Arg	Val	Tyr	Ser	Asp 440	Leu	Ser	Ser	Ile	Cys 445	Arg	Ala	Ala	Val	His 450
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<212> DNA

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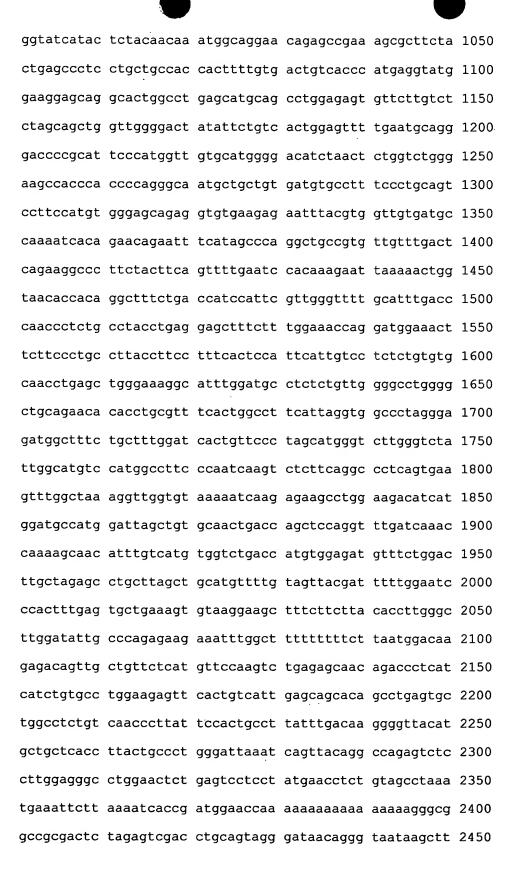
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Leu	Asp	Gln	Ile	Gln 230	Ala	Leu	Arg	Trp	Ile 235	Glu	Glu	Asn	Val	Gly 240
Ala	Phe	Gly	Gly	Asp 245	Pro	Lys	Arg	Val	Thr 250	Ile	Phe	Gly	Ser	Gly 255
Ala	Gly	Ala	Ser	Cys 260	Val	Ser	Leu	Leu	Thr 265	Leu	Ser	His	Tyr	Ser 270
Glu	Gly	Leu	Phe	Gln 275	Lys	Ala	Ile	Ile	Gln 280	Ser	Gly	Thr	Ala	Leu 285
Ser	Ser	Trp	Ala	Val 290	Asn	Tyr	Gln	Pro	Ala 295	Lys	Tyr	Thr	Arg	Ile 300
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Val	Glu	Cys	Leu	Arg 320	Asn	Lys	Asn	Tyr	Lys 325	Glu	Leu	Ile	Gln	Gln 330
Thr	Ile	Thr	Pro	Ala 335	Thr	Tyr	His	Ile	Ala 340	Phe	Gly	Pro	Val	Ile 345

Asp	Gly	Asp	Val	Ile 350	Pro	Asp	Asp	Pro	Gln 355	Ile	Leu	Met	Glu	Gln 360
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Ile	Lys	Phe	Met	Tyr 425	Thr	Asp	Trp	Ala	Asp 430	Lys	Glu	Asn	Pro	Glu 435
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Val	Ala	Pro	Ala	Val 455	Ala	Ala	Asp	Leu	His 460	Ala	Gln	Tyr	Gly	Ser 465
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Pro	Asp	Met	Thr	Ser 620	Phe	Pro	Tyr	Gly	Thr 625	Arg.	Arg	Ser	Pro	Ala 630
Lys	Ile	Trp	Pro	Thr	Thr	Lys	Arg	Pro	Ala	Ile	Thr	Pro	Ala	Asn

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Ser Val Thr Ile	Ala Val Gl 680	y Ala Ser	Leu Leu Phe 685	Leu Asn Ile 690							
Leu Ala Phe Ala	Ala Leu Ty 695	r Tyr Lys	Lys Asp Lys 700	Arg Arg His 705							
Glu Thr His Arg	Arg Pro Se 710	r Pro Gln	Arg Asn Thr 715	Thr Asn Asp 720							
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Gln Leu Glu His	Asp His Gl 740	u Cys Glu	Ser Leu Gln 745	Ala His Asp 750							
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Gln Thr Phe Glu Tyr Leu Lys Arg Glu His Ser Leu Ser Lys Pro
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Tyr Gln Gly Val Gly Thr Gly Ser Ser Ser Leu Trp Asn Leu Met
65 70 75

Gly Asn Ala Met Val Met Thr Gln Tyr Ile Arg Leu Thr Pro Asp 80 85 90

Met Gln Ser Lys Gln Gly Ala Leu Trp Asn Arg Val Pro Cys Phe 95 100 105

Leu Arg Asp Trp Glu Leu Gln Val His Phe Lys Ile His Gly Gln 110 115 120

Gly Lys Lys Asn Leu His Gly Asp Gly Leu Ala Ile Trp Tyr Thr 125 130 135

Lys Asp Arg Met Gln Pro Gly Pro Val Phe Gly Asn Met Asp Lys
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Phe Val Gly Leu Gly Val Phe Val Asp Thr Tyr Pro Asn Glu Glu 155 160 165

Lys Gln Gln Glu Arg Val Phe Pro Tyr Ile Ser Ala Met Val Asn 170 175 180

Asn Gly Ser Leu Ser Tyr Asp His Glu Arg Asp Gly Arg Pro Thr 185 190 190

Glu Leu Gly Gly Cys Thr Ala Ile Val Arg Asn Leu His Tyr Asp 200 205 210

Thr Phe Leu Val Ile Arg Tyr Val Lys Arg His Leu Thr Ile Met 215 220 225

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Pro Gly Val Arg Leu Pro Arg Gly Tyr Tyr Phe Gly Thr Ser Ser 245 250 255

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HOWFULL TOTOP
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35 40 45

Arg Ile Met Pro Asp Pro Val Thr Glu Pro Pro Val Thr Asp Pro 50 55 60

Val Tyr Glu Ala Leu Leu Tyr Cys Asn Ile Pro Ser Val Ala Glu 65 70 75

Arg Ser Met Glu Gly His Ala Pro His His Phe Lys Leu Val Ser 80 85 90

Val His Val Phe Ile Arg His Gly Asp Arg Tyr Pro Leu Tyr Val 95 100 105

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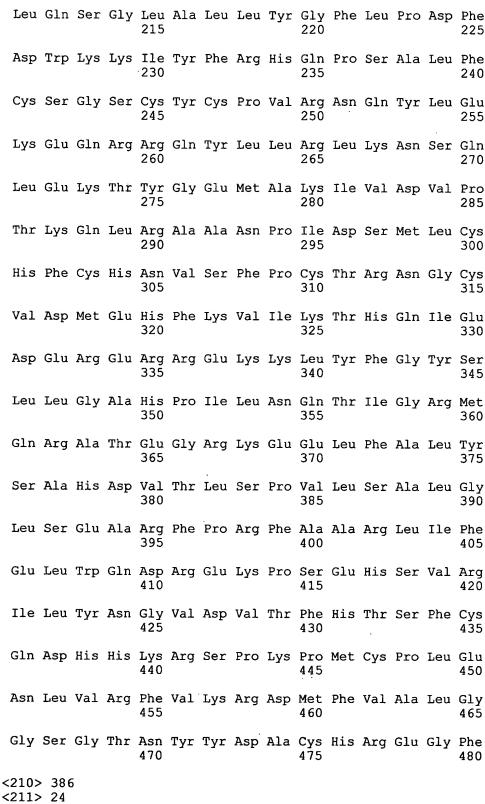
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Leu Pro Leu Tyr Pro Asn His Pro Leu Cys Glu Met Gly Glu Leu
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185 190 195

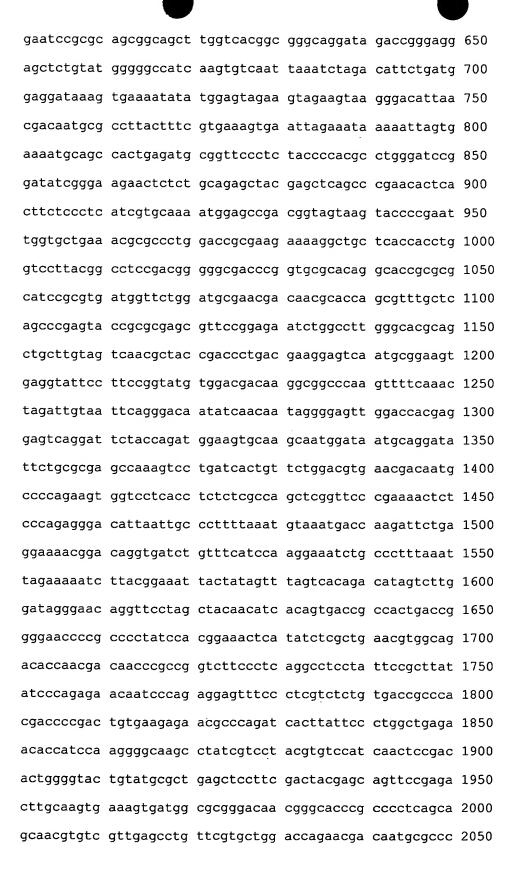
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Arg	Asp	Tyr	Arg	Cys 860	Lys	Pro	Pro	Thr	Val 865	Cys	Leu	Ser	Ile	Tyr 870
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Asp Lys Val Leu Gly Gly His Glu Cys Gln Pro His Ser Gln Pro 35 40 45

Trp Gln Ala Ala Leu Phe Gln Gly Gln Gln Leu Leu Cys Gly Gly
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Val Leu Val Gly Gly Asn Trp Val Leu Thr Ala Ala His Cys Lys
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Pro	Ser	Leu	Thr	Cys 455	Ser	Leu	Thr	Pro	Leu 460	Gly	Leu	Ala	Leu	Val 465
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Pro Arg Ser Tyr Ser Val Val Glu Glu Thr Glu Gly Ser Ser Phe
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Val Thr Asn Leu Ala Lys Asp Leu Gly Leu Glu Gln Arg Glu Phe
50 55 60

Ser Arg Arg Gly Val Arg Val Val Ser Arg Gly Asn Lys Leu His
65 70 75

Leu Gln Leu Asn Gln Glu Thr Ala Asp Leu Leu Leu Asn Glu Lys 80 85 90

Leu Asp Arg Glu Asp Leu Cys Gly His Thr Glu Pro Cys Val Leu 95 100 105

Arg Phe Gln Val Leu Leu Glu Ser Pro Phe Glu Phe Phe Gln Ala 110 115 120

Glu Leu Gln Val Ile Asp Ile Asn Asp His Ser Pro Val Phe Leu 125 130 135

Asp Lys Gln Met Leu Val Lys Val Ser Glu Ser Ser Pro Pro Gly
140 145 150

Thr Thr Phe Pro Leu Lys Asn Ala Glu Asp Leu Asp Val Gly Gln
• 155 160 165

Asn Asn Ile Glu Asn Tyr Ile Ile Ser Pro Asn Ser Tyr Phe Arg 170 175 180

Val Leu Thr Arg Lys Arg Ser Asp Gly Arg Lys Tyr Pro Glu Leu 185 190 195

Val Leu Asp Lys Ala Leu Asp Arg Glu Glu Glu Ala Glu Leu Arg
200 205 210

Leu Thr Leu Thr Ala Leu Asp Gly Gly Ser Pro Pro Arg Ser Gly 215 220 225

Thr Ala Gln Val Tyr Ile Glu Val Leu Asp Val Asn Asp Asn Ala

				230					235					240
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Ser	Pro	Val	Gly	Phe 260	Leu	Val	Val	Lys	Val 265	Ser	Ala	Thr	Asp	Val 270
Asp	Thr	Gly	Val	Asn 275	Gly	Glu	Ile	Ser	Tyr 280	Ser	Leu	Phe	Gln	Ala 285
Ser	Glu	Glu	Ile	Gly 290	Lys	Thr	Phe	Lys	Ile 295	Asn	Pro	Leu	Thr	Gly 300
Glu	Ile	Glu	Leu	Lys 305	Lys	Gln	Leu	Asp	Phe 310	Glu	Lys	Leu	Gln	Ser 315
Tyr	Glu	Val	Asn	Ile 320	Glu	Ala	Arg	Asp	Ala 325	Gly	Thr	Phe	Ser	Gly 330
Lys	Cys	Thr	Val	Leu 335	Ile	Gln	Val	Ile	Asp 340	Val	Asn	Asp	His	Ala 345
Pro	Glu	Val	Thr	Met 350	Ser	Ala	Phe	Thr	Ser 355	Pro	Ile	Pro	Glu	Asn 360
Ala	Pro	Glu	Thr	Val 365	Val	Ala	Leu	Phe	Ser 370	Val	Ser	Asp	Leu	Asp 375
Ser	Gly	Glu	Asn	Gly 380	Lys	Ile	Ser	Cys	Ser 385	Ile	Gln	Glu	Asp	Leu 390
Pro	Phe	Leu	Leu	Lys 395	Ser	Ala	Glu	Asn	Phe 400	Tyr	Thr	Leu	Leu	Thr 405
Glu	Arg	Pro	Leu	Asp 410	Arg	Glu	Ser	Arg	Ala 415	Glu	Tyr	Asn	Ile	Thr 420
Ile	Thr	Val	Thr	Asp 425	Leu	Gly	Thr	Pro	Met 430	Leu	Ile	Thr	Gln	Leu 435
Asn	Met	Thr	Val	Leu 440	Ile	Ala	Asp	Val	Asn 445	Asp	Asn	Ala	Pro	Ala 450
Phe	Thr	Gln	Thr	Ser 455	Tyr	Thr	Leu	Phe	Val 460	Arg	Glu	Asn	Asn	Ser 465
Pro	Ala	Leu	His	Ile 470	Arg	Ser	Val	Ser	Ala 475	Thr	Asp	Arg	Asp	Ser 480
Gly	Thr	Asn	Ala	Gln 485	Val	Thr	Tyr	Ser	Leu 490	Leu	Pro	Pro	Gln	Asp 495
Pro	His	Leu	Pro	Leu 500	Thr	Ser	Leu	Val	Ser 505	Ile	Asn	Ala	Asp	Asn 510
Gly	His	Leu	Phe	Ala 515	Leu	Arg	Ser	Leu	Asp 520	Tyr	Glu	Ala	Leu	Gln 525

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Leu	Ser	Ser	Glu	Ala 545	Leu	Val	Arg	Val	Val 550	Val	Leu	Asp	Ala	Asn 555
Asp	Asn	Ser	Pro	Phe 560	Val	Leu	Tyr	Pro	Leu 565	Gln	Asn	Gly	Ser	Ala 570
Pro	Cys	Thr	Glu	Leu 575	Val	Pro	Arg	Ala	Ala 580	Glu	Pro	Gly	Tyr	Leu 585
Val	Thr	Lys	Val	Val 590	Ala	Val	Asp	Gly	Asp 595	Ser	Gly	Gln	Asn	Ala 600
Trp	Leu	Ser	Tyr	Gln 605	Leu	Leu	Lys	Ala	Thr 610	Glu	Leu	Gly	Leu	Phe 615
Gly	Val	Trp	Ala	His 620	Asn	Gly	Glu	Val	Arg 625	Thr	Ala	Arg	Leu	Leu 630
Ser	Glu	Arg	Asp	Ala 635	Ala	Lys	His	Arg	Leu 640	Val	Val	Leu	Val	Lys 645
Asp	Asn	Gly	Glu	Pro 650	Pro	Arg	Ser	Ala	Thr 655	Ala	Thr	Leu	His	Val 660
Leu	Leu	Val	Asp	Gly 665	Phe	Ser	Gln	Pro	Tyr 670	Leu	Pro	Leu	Pro	Glu 675
Ala	Ala	Pro	Thr	Gln 680	Ala	Gln	Ala	Asp	Leu 685	Leu	Thr	Val	Tyr	Leu 690
Val	Val	Ala	Leu	Ala 695	Ser	Val	Ser	Ser	Leu 700	Phe	Leu	Phe	Ser	Val 705
Leu	Leu	Phe	Val	Ala 710	Val	Arg	Leu	Cys	Arg 715	Arg	Ser	Arg	Ala	Ala 720
Ser	Val	Gly	Arg	Cys 725	Leu	Val	Pro	Glu	Gly 730	Pro	Leu	Pro	Gly	His 735
Leu	Val	Asp	Met	Ser 740	Gly	Thr	Arg	Thr	Leu 745	Ser	Gln	Ser	Tyr	Gln 750
Tyr	Glu	Val	Cys	Leu 755	Ala	Gly	Gly	Ser	Gly 760	Thr	Asn	Glu	Phe	Lys 765
Phe	Leu	Lys	Pro	Ile 770	Ile	Pro	Asn	Phe	Pro 775	Pro	Gln	Cys	Pro	Gly 780
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35 40 45

Glu Gln Pro Ala His Pro Leu Gln Val Gly Ala Val Tyr Leu Gly
50 55 60

Glu Glu Glu Leu Leu His Asp Pro Met Gly Gln Asp Arg Ala Ala 65 70 75

Glu Glu Ala Asn Ala Val Leu Gly Leu Asp Thr Gln Gly Asp His

Ser         Ser         Glu         Pro         Ser         Gly         Val         Thr         Cys         Gly         Ala         Ala         Gly         Ala         His         Phe         Pro         Asp         Arg         Glu         Glu         Glu         Tyr         Tyr         Thr         Gly           Pro         Glu         Ala         His         Phe         Pro         Asp         Ala         Pro         Tyr         Tyr					80					85					90
Asp Ser Arg Cys Asn Val Arg Glu Ser Leu Phe Ser Leu Asp Gly 135  Ala Gly Ala His Phe Pro Asp Arg Glu Glu Glu Tyr Tyr Thr Glu 145  Pro Glu Val Ala Glu Ser Asp Ala Ala Pro Thr Glu Asp Ser Asr 165  Asn Thr Glu Ser Leu Lys Ser Pro Lys Val Asn Cys Glu Glu Arg 175  Asn Ile Thr Gly Leu Glu Asn Phe Thr Leu Lys Ile Leu Asn Met 195  Ser Gln Asp Leu Met Asp Phe Leu Asn Pro Asn Gly Ser Asp Cys 200  Thr Leu Val Leu Phe Tyr Thr Pro Trp Cys Arg Phe Ser Ala Ser 225  Leu Ala Pro His Phe Asn Ser Leu Pro Arg Ala Phe Pro Ala Leu 235  Arg Phe Gly Thr Val Ala Val Pro Asn Ile Leu Leu Phe Gln Gly 270  Ala Lys Pro Met Ala Arg Phe Asn His Thr Asp Arg Thr Leu Glu 285  Thr Leu Lys Ile Phe Ile Phe Asn Gln Thr Gly Ile Glu Ala Lys 290  Lys Asn Val Val Val Thr Gln Ala Asp Trp Leu Leu Val Phe Ser Leu 330  Phe Phe Leu Ile Ser Phe Ile Met Tyr Ala Thr Ile Arg Thr Glu 345  Ser Ile Arg Trp Leu Ile Pro Gly Gln Glu Glu His Val Glu 360  (210> 411	Met	Val	Met	Leu		Val	Ile	Pro	Gly		Ala	Glu	Asp	Lys	Val 105
Ala Gly Ala His Phe Pro Asp Arg Glu Glu Glu Tyr Tyr Thr Glu 140  Pro Glu Val Ala Glu Ser Asp Ala Ala Pro Thr Glu Asp Ser Asm 155  Asn Thr Glu Ser Leu Lys Ser Pro Lys Val Asn Cys Glu Glu Arg 175  Asn Ile Thr Gly Leu Glu Asn Phe Thr Leu Lys Ile Leu Asn Met 185  Ser Gln Asp Leu Met Asp Phe Leu Asn Pro Asn Gly Ser Asp 210  Thr Leu Val Leu Phe Tyr Thr Pro Trp Cys Arg Phe Ser Ala Ser 225  Leu Ala Pro His Phe Asn Ser Leu Pro Asn Ala Phe Pro Ala Leu 230  His Phe Leu Ala Leu Asp Ala Ser Gln His Ser Ser Leu Ser Thr 260  Ala Lys Pro Met Ala Arg Phe Asn His Thr Asp Arg Thr Leu Glu 285  Thr Leu Lys Ile Phe Ile Phe Asn Gln Thr Gly Ile Glu Ala Lys 290  Lys Asn Val Val Val Thr Gln Ala Asp Trp Leu Leu Val Phe Ser Leu 330  Phe Phe Leu Ile Ser Phe Ile Met Tyr Ala Thr Ile Arg Thr Glu 345  Ser Ile Arg Trp Leu Ile Pro Gly Gln Glu Glu His Val Glu 360  (210) 411	Ser	Ser	Glu	Pro		Gly	Val	Thr	Cys			Gly	Gly	Ala	Glu 120
Pro Glu Val Ala Glu Ser Asp Ala Ala Pro Thr Glu Asp Ser Asr Asn Thr Glu Ser Leu Lys Ser Pro Lys Val Asn Cys Glu Glu Arg 170  Asn Ile Thr Gly Leu Glu Asn Phe Thr Leu Lys Ile Leu Asn Met 190  Ser Gln Asp Leu Met Asp Phe Leu Asn Pro Asn Gly Ser Asp Cys 200  Thr Leu Val Leu Phe Tyr Thr Pro Trp Cys Arg Phe Ser Ala Ser 220  Leu Ala Pro His Phe Asn Ser Leu Pro Arg Ala Phe Pro Ala Leu 230  Arg Phe Gly Thr Val Ala Val Pro Asn Ile Leu Leu Phe Gln Gly 270  Ala Lys Pro Met Ala Arg Phe Asn His Thr Asp Arg Thr Leu Glu 285  Thr Leu Lys Ile Phe Ile Phe Asn Gln Thr Gly Ile Glu Ala Lys 290  Lys Asn Val Val Val Thr Gln Ala Asp Trp Leu Leu Val Pro Ser Leu Pro 330  Phe Phe Leu Ile Ser Phe Ile Met Tyr Ala Thr Ile Arg Thr Glu 345  Ser Ile Arg Trp Leu Ile Pro Gly Gln Glu Glu Glu His Val Glu 3660 <col/> <li>411</li>	Asp	Ser	Arg	Cys		Val	Arg	Glu	Ser		Phe	Ser	Leu	Asp	Gly 135
Asn Thr Glu Ser Leu Lys Ser Pro Lys Val Asn Cys Glu Glu Arg 170  Asn Ile Thr Gly Leu Glu Asn Phe Thr Leu Lys Ile Leu Asn Met 185  Ser Gln Asp Leu Met Asp Phe Leu Asn Pro Asn Gly Ser Asp Cys 210  Thr Leu Val Leu Phe Tyr Thr Pro Trp Cys Arg Phe Ser Ala Ser 225  Leu Ala Pro His Phe Asn Ser Leu Pro Arg Ala Phe Pro Ala Leu 230  Arg Phe Leu Ala Leu Asp Ala Ser Gln His Ser Ser Leu Ser Thr 265  Arg Phe Gly Thr Val Ala Val Pro Asn Ile Leu Leu Phe Gln Gly 270  Ala Lys Pro Met Ala Arg Phe Asn His Thr Asp Arg Thr Leu Glu 275  Thr Leu Lys Ile Phe Ile Phe Asn Gln Thr Gly Ile Glu Ala Lys 290  Lys Asn Val Val Val Thr Gln Ala Asp Gln Ile Gly Pro Leu Pro 315  Ser Thr Leu Ile Lys Ser Val Asp Trp Leu Leu Val Phe Ser Leu 330  Phe Phe Leu Ile Ser Phe Ile Met Tyr Ala Thr Ile Arg Thr Glu 335  Ser Ile Arg Trp Leu Ile Pro Gly Gln Glu Glu His Val Glu 360 <col/> <li>411</li>	Ala	Gly	Ala	His		Pro	Asp	Arg	Glu		Glu	Tyr	Tyr	Thr	Glu 150
Asn Ile Thr Gly Leu Glu Asn Phe Thr Leu Lys Ile Leu Asn Met 195  Ser Gln Asp Leu Met Asp Phe Leu Asn Pro Asn Gly Ser Asp Cys 200  Thr Leu Val Leu Phe Tyr Thr Pro Trp Cys Arg Phe Ser Ala Ser 225  Leu Ala Pro His Phe Asn Ser Leu Pro Arg Ala Phe Pro Ala Leu 230  His Phe Leu Ala Leu Asp Ala Ser Gln His Ser Ser Leu Ser Thr 245  Arg Phe Gly Thr Val Ala Val Pro Asn Ile Leu Leu Phe Gln Gly 270  Ala Lys Pro Met Ala Arg Phe Asn Gln Thr Gly Ile Glu Ala Lys 290  Lys Asn Val Val Val Thr Gln Ala Asp Gln Ile Gly Pro Leu Pro 300  Phe Phe Leu Ile Ser Phe Ile Met Tyr Ala Thr Ile Arg Thr Glu 335  Ser Ile Arg Trp Leu Ile Pro Gly Gln Glu Glu Glu His Val Glu 350  (<210> 411	Pro	Glu	Val	Ala		Ser	Asp	Ala	Ala		Thr	Glu	Asp	Ser	Asn 165
Ser Gln Asp Leu Met Asp Phe Leu Asn Pro Asn Gly Ser Asp Cys 210  Thr Leu Val Leu Phe Tyr Thr Pro Trp Cys Arg Phe Ser Ala Ser 225  Leu Ala Pro His Phe Asn Ser Leu Pro Arg Ala Phe Pro Ala Leu 240  His Phe Leu Ala Leu Asp Ala Ser Gln His Ser Ser Leu Ser Thr 255  Arg Phe Gly Thr Val Ala Val Pro Asn Ile Leu Leu Phe Gln Gly 270  Ala Lys Pro Met Ala Arg Phe Asn His Thr Asp Arg Thr Leu Glu 285  Thr Leu Lys Ile Phe Ile Phe Asn Gln Thr Gly Ile Glu Ala Lys 290  Lys Asn Val Val Val Thr Gln Ala Asp Trp Leu Leu Val Phe Ser Leu 330  Phe Phe Leu Ile Ser Phe Ile Met Tyr Ala Thr Ile Arg Thr Glu 345  Ser Ile Arg Trp Leu Ile Pro Gly Gln Glu Gln Glu His Val Glu 360  <<210> 411	Asn	Thr	Glu	Ser		Lys	Ser	Pro	Lys		Asn	Cys	Glu	Glu	Arg 180
Thr Leu Val Leu Phe Tyr Thr Pro Trp Cys Arg Phe Ser Ala Ser 225  Leu Ala Pro His Phe Asn Ser Leu Pro Arg 235  Arg Phe Leu Ala Leu Asp Ala Ser Gln His Ser Ser Leu Ser Thr 255  Arg Phe Gly Thr Val Ala Val Pro Asn Ile Leu Leu Phe Gln Gly 270  Ala Lys Pro Met Ala Arg Phe Asn His Thr Asp Arg Thr Leu Glu 285  Thr Leu Lys Ile Phe Ile Phe Asn Gln Thr Gly Ile Glu Ala Lys 290  Lys Asn Val Val Val Thr Gln Ala Asp Gln Ile Gly Pro Leu Pro 305  Ser Thr Leu Ile Lys Ser Val Asp Trp Leu Glu 225  Ser Ile Arg Trp Leu Ile Pro Gly Gln Glu Gln Glu His Val Glu 360  Ser Ile Arg Trp Leu Ile Pro Gly Gln Glu Gln Glu His Val Glu 360	Asn	Ile	Thr	Gly		Glu	Asn	Phe	Thr		Lys	Ile	Leu	Asn	Met 195
Leu Ala Pro His Phe Asn Ser Leu Pro Arg Ala Phe Pro Ala Leu 230  His Phe Leu Ala Leu Asp Ala Ser Gln His Ser Ser Leu Ser Thr 255  Arg Phe Gly Thr Val Ala Val Pro Asn Ile Leu Leu Phe Gln Gly 270  Ala Lys Pro Met Ala Arg Phe Asn His Thr Asp Arg Thr Leu Glu 285  Thr Leu Lys Ile Phe Ile Phe Asn Gln Thr 295  Lys Asn Val Val Val Thr Gln Ala Asp Gln Ile Gly Pro Leu Pro 305  Ser Thr Leu Ile Lys Ser Val Asp Trp Leu Leu Val Phe Ser Leu 330  Phe Phe Leu Ile Ser Phe Ile Met Tyr Ala Thr Ile Arg Thr Glu 345  Ser Ile Arg Trp Leu Ile Pro Gly Gln Glu Glu His Val Glu 360  <<210> 411	Ser	Gln	Asp	Leu		Asp	Phe	Leu	Asn		Asn	Gly	Ser	Asp	Cys 210
His Phe Leu Ala Leu Asp Ala Ser Gln His Ser Ser Leu Ser Thr 255  Arg Phe Gly Thr Val Ala Val Pro Asn Ile Leu Leu Phe Gln Gly 270  Ala Lys Pro Met Ala Arg Phe Asn His Thr Asp Arg Thr Leu Glu 285  Thr Leu Lys Ile Phe Ile Phe Asn Gln Thr Gly 295  Lys Asn Val Val Val Thr Gln Ala Asp Gln Ile Gly Pro Leu Pro 315  Ser Thr Leu Ile Lys Ser Val Asp Trp Leu Gly Ile Gly Pro Leu 330  Phe Phe Leu Ile Ser Phe Ile Met Tyr Ala Thr Ile Arg Thr Glu 345  Ser Ile Arg Trp Leu Ile Pro Gly Gln Glu Gln Glu His Val Glu 360  <<210> 411	Thr	Leu	Val	Leu		Tyr	Thr	Pro	Trp		Arg	Phe	Ser	Ala	Ser 225
Arg Phe Gly Thr Val Ala Val Pro Asn Ile Leu Leu Phe Gln Gly 270  Ala Lys Pro Met Ala Arg Phe Asn His Thr 280 Asp Arg Thr Leu Glu 285  Thr Leu Lys Ile Phe Ile Phe Asn Gln Thr Gly 11e Glu Ala Lys 295  Lys Asn Val Val Val Thr Gln Ala Asp Gln Ile Gly Pro Leu Pro 315  Ser Thr Leu Ile Lys Ser Val Asp Trp Leu Leu Val Phe Ser Leu 325  Phe Phe Leu Ile Ser Phe Ile Met Tyr Ala Thr Ile Arg Thr Glu 345  Ser Ile Arg Trp Leu Ile Pro Gly Gln Glu Gln Glu His Val Glu 360  <210> 411	Leu	Ala	Pro	His		Asn	Ser	Leu	Pro		Ala	Phe	Pro	Ala	Leu 240
Ala Lys Pro Met Ala Arg Phe Asn His Thr Asp Arg Thr Leu Glu 285  Thr Leu Lys Ile Phe 1le Phe Asn Gln Thr Gly Ile Glu Ala Lys 300  Lys Asn Val Val Val Thr Gln Ala Asp Gln Ile Gly Pro Leu Pro 315  Ser Thr Leu Ile Lys Ser Val Asp Trp Leu Leu Val Phe Ser Leu 320  Phe Phe Leu Ile Ser Phe Ile Met Tyr Ala Thr Ile Arg Thr Glu 345  Ser Ile Arg Trp Leu Ile Pro Gly Gln Glu Gln Glu His Val Glu 360  <210> 411	His	Phe	Leu	Ala	Leu 245	Asp	Ala	Ser	Gln		Ser	Ser	Leu	Ser	Thr 255
Thr Leu Lys Ile Phe Ile Phe Asn Gln Thr Gly Ile Glu Ala Lys 300  Lys Asn Val Val Val Thr Gln Ala Asp Gln Ile Gly Pro Leu Pro 310  Ser Thr Leu Ile Lys Ser Val Asp Trp Leu Leu Val Phe Ser Leu 320  Phe Phe Leu Ile Ser Phe Ile Met Tyr Ala Thr Ile Arg Thr Glu 335  Ser Ile Arg Trp Leu Ile Pro Gly Gln Glu Gln Glu His Val Glu 350  <210> 411	Arg	Phe	Gly	Thr		Ala	Val	Pro	Asn		Leu	Leu	Phe	Gln	Gly 270
Lys Asn Val Val Val Thr Gln Ala Asp Gln Ile Gly Pro Leu Pro 315  Ser Thr Leu Ile Lys Ser Val Asp Trp Leu Leu Val Phe Ser Leu 320  Phe Phe Leu Ile Ser Phe Ile Met Tyr Ala Thr Ile Arg Thr Glu 335  Ser Ile Arg Trp Leu Ile Pro Gly Gln Glu Gln Glu His Val Glu 350  <210> 411	Ala	Lys	Pro	Met		Arg	Phe	Asn	His		Asp	Arg	Thr	Leu	Glu 285
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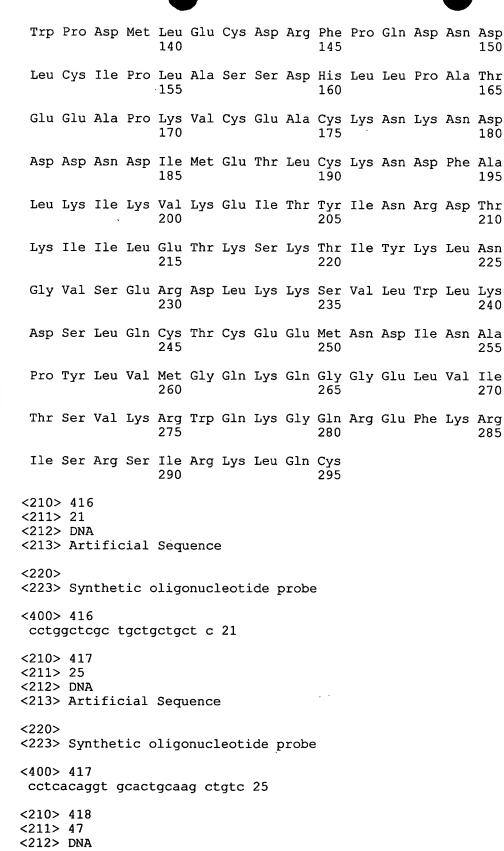
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Thr Lys Lys Phe Leu Cys Ser Leu Phe Ala Pro Val Cys Leu Asp 95 100 105

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Leu Trp Leu Ser Phe Ala Pro Val Ala Asp Val Ile Ala Glu Asp 50 55 60

Leu Val Leu Ser Met Glu Gln Ile Asn Trp Leu Ser Leu Val Tyr
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Leu Val Val Ser Thr Pro Phe Gly Val Ala Ala Ile Trp Ile Leu 80 85 90

Asp Ser Val Gly Leu Arg Ala Ala Thr Ile Leu Gly Ala Trp Leu
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Asn Phe Ala Gly Ser Val Leu Arg Met Val Pro Cys Met Val Val

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Leu	Ala	Thr	Met	Ser 170	Asn	Pro	Leu	Gly	Val 175	Leu	Val	Ala	Asn	Val 180
Leu	Ser	Pro	Val	Leu 185	Val	Lys	Lys	Gly	Glu 190	Asp	Ile	Pro	Leu	Met 195
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Thr	Ile	Суз	Leu	Trp 215	Glu	Ser	Val	Pro	Pro 220	Thr	Pro	Pro	Ser	Ala 225
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<212> PRT

<213> Homo sapiens

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Ile Gly Lys Leu Ser Gln Glu Leu Gly Arg Glu Glu Arg Arg 50 55 60

Gln Ala Gly Ala Ala Phe Gln Val Leu Gln Leu Pro Gln Ala Leu
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Arg Leu Asp Arg Glu Gln Leu Cys Arg Gln Trp Asp Pro Cys Leu 95 100 105

Val Ser Phe Asp Val Leu Ala Thr Gly Asp Leu Ala Leu Ile His 110 115 120

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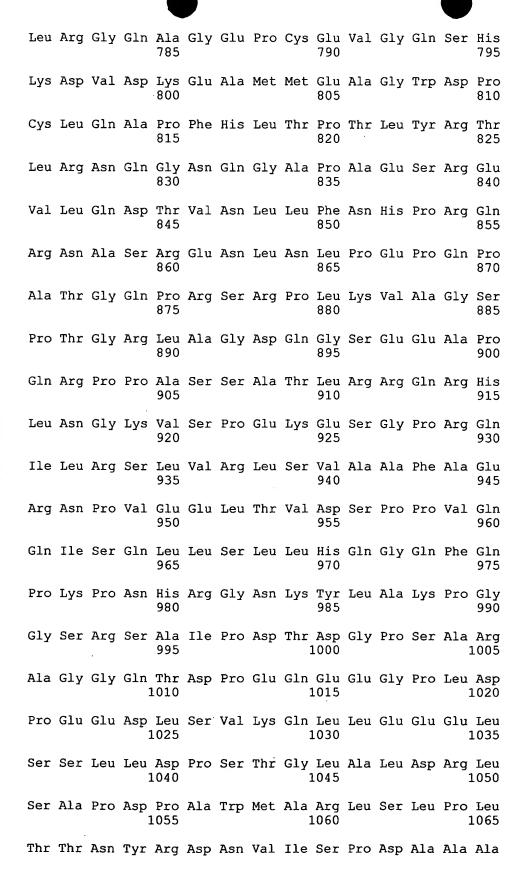
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Cys	Trp	Leu	Ser	Gln 395	Glu	Leu	Gly	His	Phe 400	Arg	Leu	Lys	Arg	Thr 405
Asn	Gly	Asn	Thr	Tyr 410	Met	Leu	Leu	Thr	Asn 415	Ala	Thr	Leu	Asp	Arg 420
Glu	Gln	Trp	Pro	Lys 425	Tyr	Thr	Leu	Thr	Leu 430	Leu	Ala	Gln	Asp	Gln 435
Gly	Leu	Gln	Pro	Leu 440	Ser	Ala	Lys	Lys	Gln 445	Leu	Ser	Ile	Gln	Ile 450
Ser	Asp	Ile	Asn	Asp 455	Asn	Ala	Pro	Val	Phe 460	Glu	Lys	Ser	Arg	Tyr 465
Glu	Val	Ser	Thr	Arg 470	Glu	Asn	Asn	Leu	Pro 475	Ser	Leu	His	Leu	Ile 480
Thr	Ile	Lys	Ala	His	Asp	Ala	Asp	Leu	Gly	Ile	Asn	Gly	Lys	Val

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Glu	Glu	Met	Ala	Gly 530	Phe	Glu	Phe	Gln	Val 535	Ile	Ala	Glu	Asp	Ser 540
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Gly	His	Leu	Leu	Val 590	Pro	Ile	Glu	Thr	Pro 595	Asn	Gly	Leu	Gly	Pro 600
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Суѕ	Leu	Ala	Val	Leu 725	Leu	Gly	Ile	Phe	Gly 730	Leu	Ile	Leu	Ala	Leu 735
Phe	Met	Ser	Ile	Cys 740	Arg	Thr	Glu	Lys	Lys 745	Asp	Asn	Arg	Ala	Tyr 750
Asn	Cys	Arg	Glu	Ala 755	Glu	Ser	Thr	Tyr	Arg 760	Gln	Gln	Pro	Lys	Arg 765
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<212> PRT

<213> Homo sapiens

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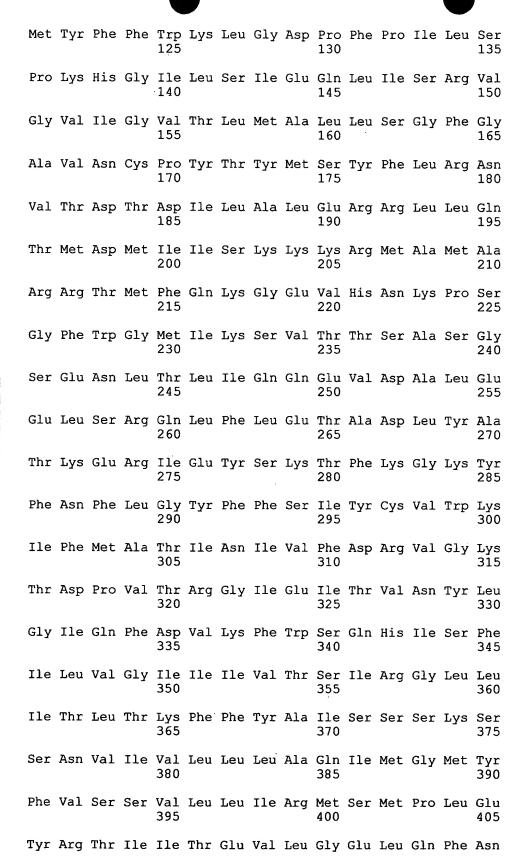
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Pro Phe Tyr Ile Gly Tyr Phe Ile Val Ser Asn Ile Arg Leu Leu 95 100 105

His Lys Gln Arg Leu Leu Phe Ser Cys Leu Leu Trp Leu Thr Phe 110 115 120



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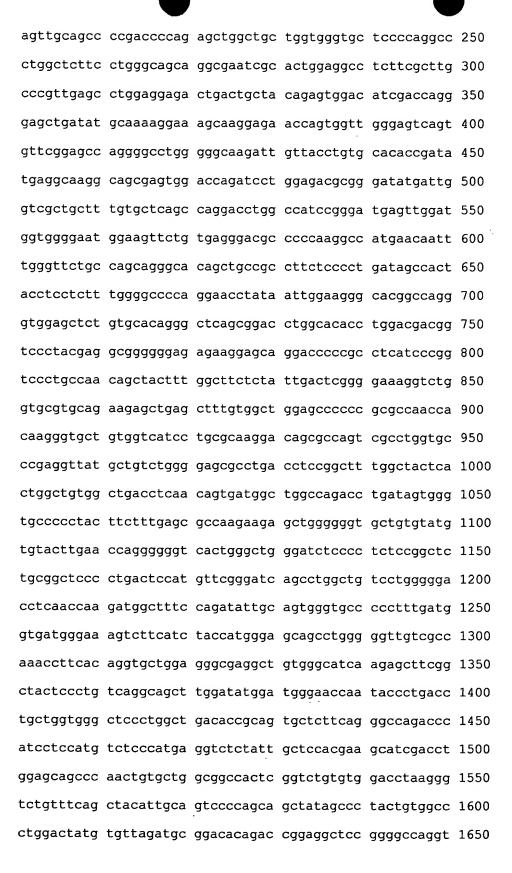
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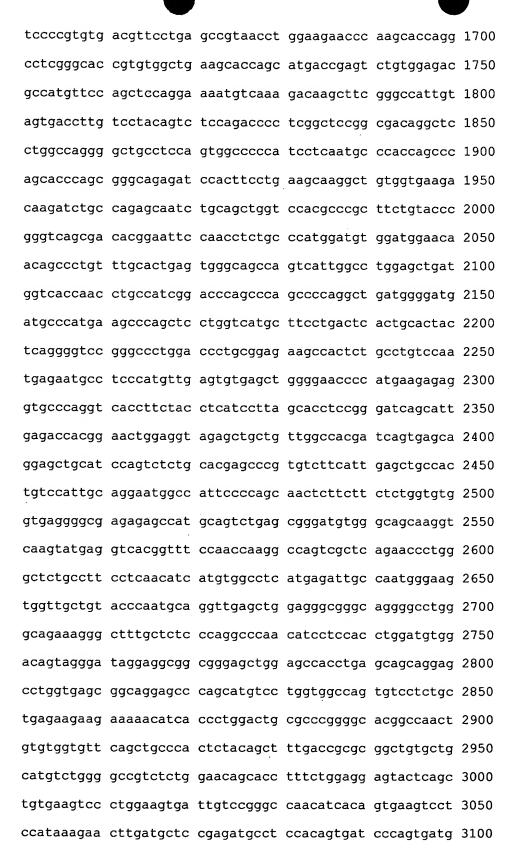
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35 40 45

Gly Glu Pro Gly Ser Leu Phe Gly Phe Ser Val Ala Leu His Arg 50 55 60

Gln Leu Gln Pro Arg Pro Gln Ser Trp Leu Leu Val Gly Ala Pro
65 70 75

Gln Ala Leu Ala Leu Pro Gly Gln Gln Ala Asn Arg Thr Gly Gly

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Arg Val Ser Asp Thr Glu Phe Gln Pro Leu Pro Met Asp Val Asp

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His	Glu	Ile	Ala	Asn 875	Gly	Lys	Trp	Leu	Leu 880	Tyr	Pro	Met	Gln	Val 885
Glu	Leu	Glu	Gly	Gly 890	Gln	Gly	Pro	Gly	Gln 895	Lys	Gly	Leu	Суз	Ser 900
Pro	Arg	Pro	Asn	Ile 905	Leu	His	Leu	Asp	Val 910	Asp	Ser	Arg	Asp	Arg 915
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Arg	Gln	Glu	Pro	Ser 935	Met	Ser	Trp	Trp	Pro 940	Val	Ser	Ser	Ala	Glu 945
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Cys Val Val Phe Ser Cys Pro Leu Tyr Ser Phe Asp Arg Ala Ala 975

Val Leu His Val Trp Gly Arg Leu Trp Asn Ser Thr Phe Leu Glu 980

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Ile Thr Val Lys Ser Ser Ile Lys Asn Leu Met Leu Arg Asp Ala 1010 1015 1020

Ser Thr Val Ile Pro Val Met Val Tyr Leu Asp Pro Met Ala Val 1025 1030 1035

Val Ala Glu Gly Val Pro Trp Trp Val Ile Leu Leu Ala Val Leu 1040 1045 1050

Ala Gly Leu Leu Val Leu Ala Leu Leu Val Leu Leu Leu Trp Lys 1055 1060 1065

Met Gly Phe Phe Lys Arg Ala Lys His Pro Glu Ala Thr Val Pro 1070 1075 1080

Gln Tyr His Ala Val Lys Ile Pro Arg Glu Asp Arg Gln Gln Phe 1085 1090 1095

Lys Glu Glu Lys Thr Gly Thr Ile Leu Arg Asn Asn Trp Gly Ser 1100 1105 1110

Pro Arg Arg Glu Gly Pro Asp Ala His Pro Ile Leu Ala Ala Asp 1115 1120 1125

Gly His Pro Glu Leu Gly Pro Asp Gly His Pro Gly Pro Gly Thr 1130 1135 1140

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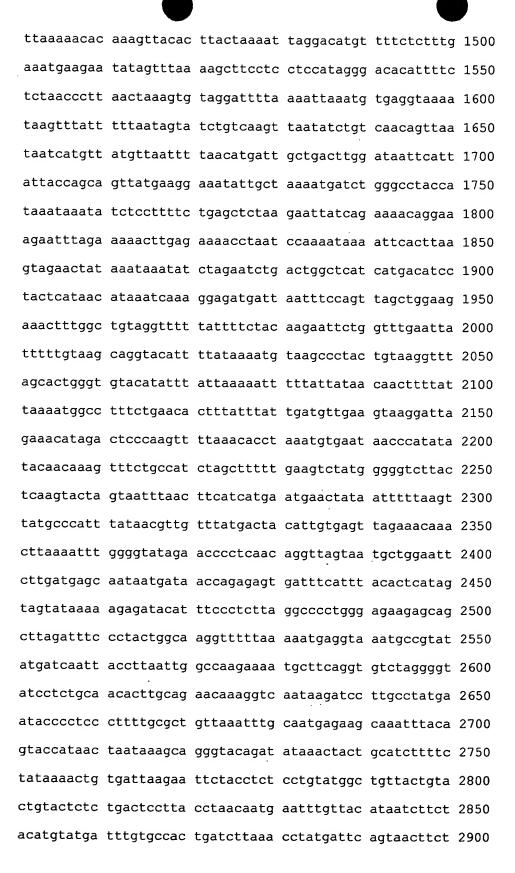
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Asn	Arg	Leu	Arg	Asp 215	Trp	Phe	Lys	Ala	Leu 220	His	Glu	Ser	Gly	Ser 225
Gln	Asn	Lys	Lys	Thr 230	Lys	Thr	Leu	Leu	Arg 235	Pro	Glu	Arg	Ser	Arg 240
Phe	Asp	Thr	Ser	Ile 245	Leu	Pro	Ile	Cys	Lys 250	Asp	Ser	Leu	Gly	Trp 255
Met	Phe	Asn	Arg	Leu 260	Asp	Thr	Asn	Tyr	Asp 265	Leu	Leu	Leu	Asp	Gln 270
Ser	Glu	Leu	Arg	Ser 275	Ile	Tyr	Leu	Asp	Lys 280	Asn	Glu	Gln	Cys	Thr 285
Lys	Ala	Phe	Phe	Asn 290	Ser	Cys	Asp	Thr	Týr 295	Lys	Asp	Ser	Leu	Ile 300
Ser	Asn	Asn	Glu	Trp 305	Cys	Tyr	Cys	Phe	Gln 310	Arg	Gln	Gln	Asp	Pro 315
Pro	Cys	Gln	Thr	Glu 320	Leu	Ser	Asn	Ile	Gln 325	Lys	Arg	Gln	Gly	Val 330
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<212> DNA

<213> Homo sapiens

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<211> 229

<212> PRT

<213> Homo sapiens

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Ser Leu Asp Ser Asp Phe Thr Phe Thr Leu Pro Ala Gly Gln Lys
35 40 45

Glu Cys Phe Tyr Gln Pro Met Pro Leu Lys Ala Ser Leu Glu Ile 50 55 60

Glu Tyr Gln Val Leu Asp Gly Ala Gly Leu Asp Ile Asp Phe His
65 70 75

Leu Ala Ser Pro Glu Gly Lys Thr Leu Val Phe Glu Gln Arg Lys 80 85 90

Ser Asp Gly Val His Thr Val Glu Thr Glu Val Gly Asp Tyr Met 95 100 105

Phe Cys Phe Asp Asn Thr Phe Ser Thr Ile Ser Glu Lys Val Ile

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Met	Lys	Leu	Glu	Asp 155	Ile	Leu	Glu	Ser	Ile 160	Asn	Ser	Ile	Lys	Ser 165
Arg	Leu	Ser	Lys	Ser 170	Gly	His	Ile	Gln	Ile 175	Leu	Leu	Arg	Ala	Phe 180
Glu	Ala	Arg	Asp	Arg 185	Asn	Ile	Gln	Glu	Ser 190	Asn	Phe	Asp	Arg	Val 195
Asn	Phe	Trp	Ser	Met 200	Val	Asn	Leu	Val	Val 205	Met	Val	Val	Val	Ser 210
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<400> 452

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Lys Glu Leu Pro Ser Pro Arg Ile Ser Cys Pro Lys Gly Ser Lys
35 40 45

Ala Tyr Gly Ser Pro Cys Tyr Ala Leu Phe Leu Ser Pro Lys Ser

50 55 60

Trp Met Asp Ala Asp Leu Ala Cys Gln Lys Arg Pro Ser Gly Lys
65 70 75

Leu Val Ser Val Leu Ser Gly Ala Glu Gly Ser Phe Val Ser Ser 80 85 90

Leu Val Arg Ser Ile Ser Asn Ser Tyr Ser Tyr Ile Trp Ile Gly
95 100 105

Leu His Asp Pro Thr Gln Gly Ser Glu Pro Asp Gly Asp Gly Trp
110 115 120

Glu Trp Ser Ser Thr Asp Val Met Asn Tyr Phe Ala Trp Glu Lys 125 130 135

Asn Pro Ser Thr Ile Leu Asn Pro Gly His Cys Gly Ser Leu Ser 140 145 150

Arg Ser Thr Gly Phe Leu Lys Trp Lys Asp Tyr Asn Cys Asp Ala 155 160 165

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<211> 550

<212> DNA

<213> Homo sapiens

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<213> Homo sapiens

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Pro Thr Gly Val Ser Asp Cys Val Thr Ile Ala Thr Cys Thr Thr 45

Asn Glu Thr Met Cys Lys Thr Thr Leu Tyr 55

Lys Cys Lys Pro Ser Asp Ser Thr Val Thr Lys Ser Cys Ala Ser 75

Lys Cys Lys Pro Ser Asp Val Asp Gly Ile Gly Gln Thr Leu Pro 80

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acccaggctc tgcagtcagc gccgcgcgg gaatcctgta cccgggcggg 350
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<210> 456

<211> 266

<212> PRT

<213> Homo sapiens

<400> 456

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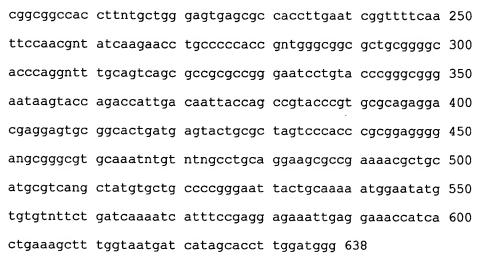
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Pro Pro Pro Leu Gly Gly Ala Ala Gly His Pro Gly Ser Ala Val
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Ser Ala Ala Pro Gly Ile Leu Tyr Pro Gly Gly Asn Lys Tyr Gln
65 70 75

Thr Ile Asp Asn Tyr Gln Pro Tyr Pro Cys Ala Glu Asp Glu Glu Cys Gly Thr Asp Glu Tyr Cys Ala Ser Pro Thr Arg Gly Gly Asp 95 Ala Gly Val Gln Ile Cys Leu Ala Cys Arg Lys Arg Lys Arg 115 Cys Met Arg His Ala Met Cys Cys Pro Gly Asn Tyr Cys Lys Asn 125 135 Gly Ile Cys Val Ser Ser Asp Gln Asn His Phe Arg Gly Glu Ile 140 145 Glu Glu Thr Ile Thr Glu Ser Phe Gly Asn Asp His Ser Thr Leu Asp Gly Tyr Ser Arg Arg Thr Thr Leu Ser Ser Lys Met Tyr His Thr Lys Gly Gln Glu Gly Ser Val Cys Leu Arg Ser Ser Asp Cys 195 Ala Ser Gly Leu Cys Cys Ala Arg His Phe Trp Ser Lys Ile Cys 205 Lys Pro Val Leu Lys Glu Gly Gln Val Cys Thr Lys His Arg Arg 215 220 225 Lys Gly Ser His Gly Leu Glu Ile Phe Gln Arg Cys Tyr Cys Gly 235 Glu Gly Leu Ser Cys Arg Ile Gln Lys Asp His His Gln Ala Ser 245 250 255 Asn Ser Ser Arg Leu His Thr Cys Gln Arg His 260 265 <210> 457 <211> 638 <212> DNA <213> Homo sapiens <220> <221> unsure <222> 30, 123, 133, 139, 180, 214, 259, 282, 308, 452, 467, 471, 473, 509, 556 <223> unknown base <400> 457 tgtgtttccc tgcagtcaga atttgggacn gcaggggttc ccggacctga 50 ttttgcagcg gaacgggaag gttttgtggg acccaggttg aaatgacggt 100 cattttttt tctttctcct tcnggagtcc ttntgagang atggttttgg 150

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<211> 4040

<212> DNA

<213> Homo sapiens

<400> 458

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<211> 747

<212> PRT

<213> Homo sapiens

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Gly Thr Asp Gln Asp Phe Tyr Ser Leu Leu Gly Val Ser Lys Thr 35 40 45

Ala Ser Ser Arg Glu Ile Arg Gln Ala Phe Lys Lys Leu Ala Leu
50 55 60

Lys Leu His Pro Asp Lys Asn Pro Asn Asn Pro Asn Ala His Gly 65 70 75

Asp Phe Leu Lys Ile Asn Arg Ala Tyr Glu Val Leu Lys Asp Glu 80 85 90

Asp Leu Arg Lys Lys Tyr Asp Lys Tyr Gly Glu Lys Gly Leu Glu
95 100 105

Asp Asn Gln Gly Gly Gln Tyr Glu Ser Trp Asn Tyr Tyr Arg Tyr 110 115 120

Asp Phe Gly Ile Tyr Asp Asp Pro Glu Ile Ile Thr Leu Glu 125 130 135

Arg Arg Glu Phe Asp Ala Ala Val Asn Ser Gly Glu Leu Trp Phe 140 145 150

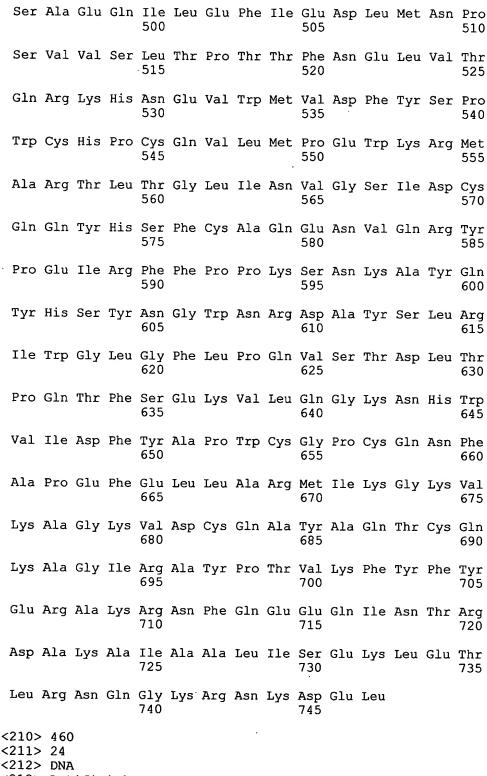
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Ile Gly Ala Val Asn Cys Gly Asp Asp Arg Met Leu Cys Arg Met 185 190 195

Lys Gly Val Asn Ser Tyr Pro Ser Leu Phe Ile Phe Arg Ser Gly

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Pro	Asp	Ile	Cys	Ser 365	Asn	Leu	Tyr	Val	Phe 370	Gln	Pro	Ser	Leu	Ala 375
Val	Phe	Lys	Gly	Gln 380	Gly	Thr	Lys	Glu	Tyr 385	Glu	Ile	His	His	Gly 390
Lys	Lys	Ile	Leu	Tyr 395	Asp	Ile	Leu	Ala	Phe 400	Ala	Lys	Glu	Ser	Val 405
Asn	Ser	His	Val	Thr 410	Thr	Leu	Gly	Pro	Gln 415	Asn	Phe	Pro	Ala	Asn 420
Asp	Lys	Glu	Pro	Trp 425	Leu	Val	Asp	Phe	Phe 430	Ala	Pro	Trp	Cys	Pro 435
Pro	Cys	Arg	Ala	Leu 440	Leu	Pro	Glu	Leu	Arg 445	Arg	Ala	Ser	Asn	Leu 450
Leu	Tyr	Gly	Gln	Leu 455	Lys	Phe	Gly <sub>,</sub>	Thr	Leu 460	Asp	Cys	Thr	Val	His 465
Glu	Gly	Leu	Cys	Asn 470	Met	Tyr	Asn	Ile	Gln 475	Ala	Tyr	Pro	Thr	Thr 480
Val	Val	Phe	Asn	Gln 485	Ser	Asn	Ile	His	Glu 490	Tyr	Glu	Gly	His	His 495



<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

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<213> Homo sapiens
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 caccatcatc tactcctact tggagtcgtt ggtgaagttt ttcattcctc 150
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 attggttctg tgggatatta ataagcgcgg tgtggaggaa actgcagctg 300
 agtgccgaaa actaggcgtc actgcgcatg cgtatgtggt agactgcagc 350
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<211> 300

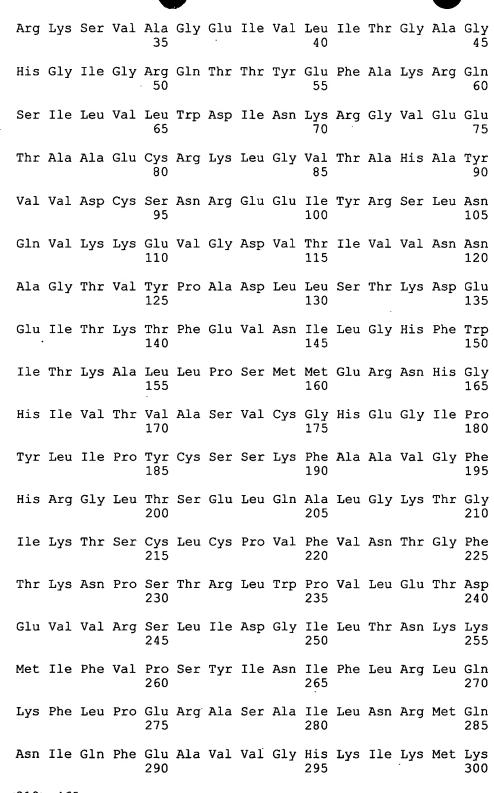
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<213> Homo sapiens

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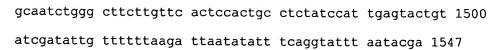
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<sup>&</sup>lt;211> 1547

<sup>&</sup>lt;212> DNA

<sup>&</sup>lt;213> Homo sapiens

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<210> 466

<211> 414

<212> PRT

<213> Homo sapiens

<400> 466

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20 25 30

Ala Ala His Phe Tyr Leu His Thr Ser Phe Ser Arg Pro His Thr
35 40 45

Gly Pro Pro Leu Pro Thr Pro Gly Pro Asp Arg Asp Arg Glu Leu
50 55 60

Thr Ala Asp Ser Asp Val Asp Glu Phe Leu Asp Lys Phe Leu Ser 65 70 75

Ala Gly Val Lys Gln Ser Asp Leu Pro Arg Lys Glu Thr Glu Gln 80 85 90

Pro Pro Ala Pro Gly Ser Met Glu Glu Ser Val Arg Gly Tyr Asp 95 100 105

Trp Ser Pro Arg Asp Ala Arg Arg Ser Pro Asp Gln Gly Arg Gln
110 115 120

Gln Ala Glu Arg Arg Ser Val Leu Arg Gly Phe Cys Ala Asn Ser 125 130 135

Ser Leu Ala Phe Pro Thr Lys Glu Arg Ala Phe Asp Asp Ile Pro 140 145 150

Asn Ser Glu Leu Ser His Leu Ile Val Asp Asp Arg His Gly Ala 155 160 165

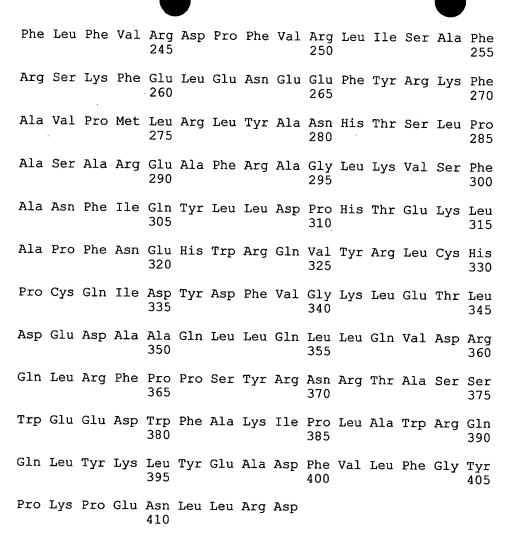
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Tyr Arg Asp Pro Leu Arg Ile Pro Arg Glu His Val His Asn Ala 200 205 210

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<213> Homo sapiens

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<210> 468

<211> 270

<212> PRT

<213> Homo sapiens

<400> 468

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Asn Ser Gly Ala Arg Val Val Ile Cys Asp Lys Asp Glu Ser Gly
35 40 45

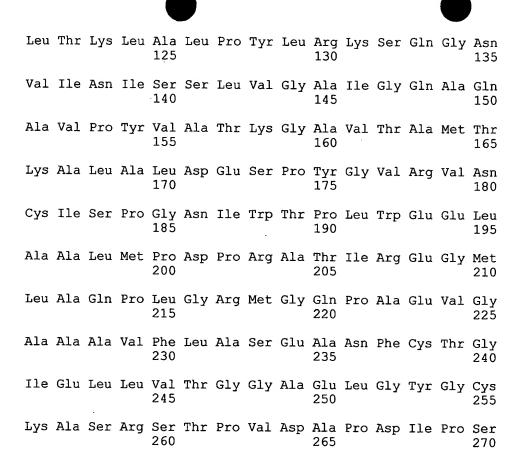
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Cys Asp Val Thr Gln Glu Asp Asp Val Lys Thr Leu Val Ser Glu
65 70 75

Thr Ile Arg Arg Phe Gly Arg Leu Asp Cys Val Val Asn Asn Ala 80 85 90

Gly His His Pro Pro Pro Gln Arg Pro Glu Glu Thr Ser Ala Gln 95 100 105

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<213> Homo sapiens

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<210> 470

<211> 180

<212> PRT

<213> Homo sapiens

<400> 470

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20 25 30

Gly Gln Gly Arg Pro Gly Pro Leu Ala Pro Gly Pro His Gln Val
35 40 40

Pro Leu Asp Leu Val Ser Arg Met Lys Pro Tyr Ala Arg Met Glu
50 55 60

Glu Tyr Glu Arg Asn Ile Glu Glu Met Val Ala Gln Leu Arg Asn
65 70 75

Ser Ser Glu Leu Ala Gln Arg Lys Cys Glu Val Asn Leu Gln Leu 80 85 90

Trp Met Ser Asn Lys Arg Ser Leu Ser Pro Trp Gly Tyr Ser Ile 95 100 105

Asn His Asp Pro Ser Arg Ile Pro Val Asp Leu Pro Glu Ala Arg 110 115 120

Cys Leu Cys Leu Gly Cys Val Asn Pro Phe Thr Met Gln Glu Asp 125 130 135

Arg Ser Met Val Ser Val Pro Val Phe Ser Gln Val Pro Val Arg 140 145 150

Arg Arg Leu Cys Pro Pro Pro Pro Arg Thr Gly Pro Cys Arg Gln
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Arg Ala Val Met Glu Thr Ile Ala Val Gly Cys Thr Cys Ile Phe 170 175 180

<210> 471

<211> 2368

<212> DNA

<213> Homo sapiens

<400> 471

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<210> 472

<211> 349

<212> PRT

<213> Homo sapiens

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Ala Leu Pro Pro Glu Gln Ser Arg Val Gln Pro Met Thr Ala Ser 35 40 45

Asn Trp Thr Leu Val Met Glu Gly Glu Trp Met Leu Lys Phe Tyr
50 55 60

Ala Pro Trp Cys Pro Ser Cys Gln Gln Thr Asp Ser Glu Trp Glu
65 70 75

Ala Phe Ala Lys Asn Gly Glu Ile Leu Gln Ile Ser Val Gly Lys 80 85 90

Val	Asp	Val	Ile	Gln 95	Glu	Pro	Gly	Leu	Ser 100	Gly	Arg	Phe	Phe	Val 105
Thr	Thr	Leu	Pro	Ala 110	Phe	Phe	His	Ala	Lys 115	Asp	Gly	Ile	Phe	Arg 120
Arg	Tyr	Arg	Gly	Pro 125	Gly	Ile	Phe	Glu	Asp 130	Leu	Gln	Asn	Tyr	Ile 135
Leu	Glu	Lys	Lys	Trp 140	Gln	Ser	Val	Glu	Pro 145	Leu	Thr	Gly	Trp	Lys 150
Ser	Pro	Ala	Ser	Leu 155	Thr	Met	Ser	Gly	Met 160	Ala	Gly	Leu	Phe	Ser 165
Ile	Ser	Gly	Lys	Ile 170	Trp	His	Leu	His	Asn 175	Tyr	Phe	Thr	Val	Thr 180
Leu	Gly	Ile	Pro	Ala 185	Trp	Cys	Ser	Tyr	Val 190	Phe	Phe	Val	Ile	Ala 195
Thr.	Leu	Val	Phe	Gly 200	Leu	Phe	Met	Gly	Leu 205	Val	Leu	Val	Val	Ile 210
Ser	Glu	Cys	Phe	Tyr 215	Val	Pro	Leu	Pro	Arg 220	His	Leu	Ser	Glu	Arg 225
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Leu	Gln	Asp	Ala	Glu 245	Glu	Glu	Lys	Asp	Asp 250	Ser	Asn	Glu	Glu	Glu 255
Asn	Lys	Asp	Ser	Leu 260	Val	Asp	Asp	Glu	Glu 265	Glu	Lys	Glu	Asp	Leu 270
Gly	Asp	Glu	Asp	Glu 275	Ala	Glu	Glu	Glu	Glu 280	Glu	Glu	Asp	Asn	Leu 285
Ala	Ala	Gly	Val	Asp 290	Glu	Glu	Arg	Ser	Glu 295	Ala	Asn	Asp	Gln	Gly 300
Pro	Pro	Gly	Glu	Asp 305	Gly	Val	Thr	Arg	Glu 310	Glu	Val	Glu	Pro	Glu 315
Glu	Ala	Glu	Glu	Gly 320	Ile	Ser	Glu	Gln	Pro 325	Cys	Pro	Ala	Asp	Thr 330
Glu	Val	Val	Glu	Asp 335	Ser	Leu	Arg	Gln	Arg 340	Lys	Ser	Gln	His	Ala 345

Asp Lys Gly Leu

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<211> 2478
<212> DNA
<213> Homo sapiens
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<213> Homo sapiens

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Ile Ala Val Ile Leu Gly Ile Leu Cys Leu Val Ile Leu Val Ile
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Ala Val Val Leu Gly Thr Met Gly Val Leu Ser Ser Pro Cys Pro
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Pro Asn Trp Ile Ile Tyr Glu Lys Ser Cys Tyr Leu Phe Ser Met 80 85 90

Ser Leu Asn Ser Trp Asp Gly Ser Lys Arg Gln Cys Trp Gln Leu 95 100 105

Gly Ser Asn Leu Leu Lys Ile Asp Ser Ser Asn Glu Leu Gly Phe 110 115 120

Ile Val Lys Gln Val Ser Ser Gln Pro Asp Asn Ser Phe Trp Ile 125 130 135

Gly Leu Ser Arg Pro Gln Thr Glu Val Pro Trp Leu Trp Glu Asp 140 145 150

Gly Ser Thr Phe Ser Ser Asn Leu Phe Gln Ile Arg Thr Thr Ala 155 160 165

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200

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Leu His Tyr Lys Pro Thr Pro Asp Leu Arg Ile Ser Ile Glu Asn
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Ser Glu Glu Ala Leu Thr Val His Ala Pro Phe Pro Ala Ala His
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Ser Asp Ser Ala Arg Leu Pro Ile Ser Ser Gly Ser Thr Ser Ser 680 685 690

Ser Arg Ile

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- <223> unknown base
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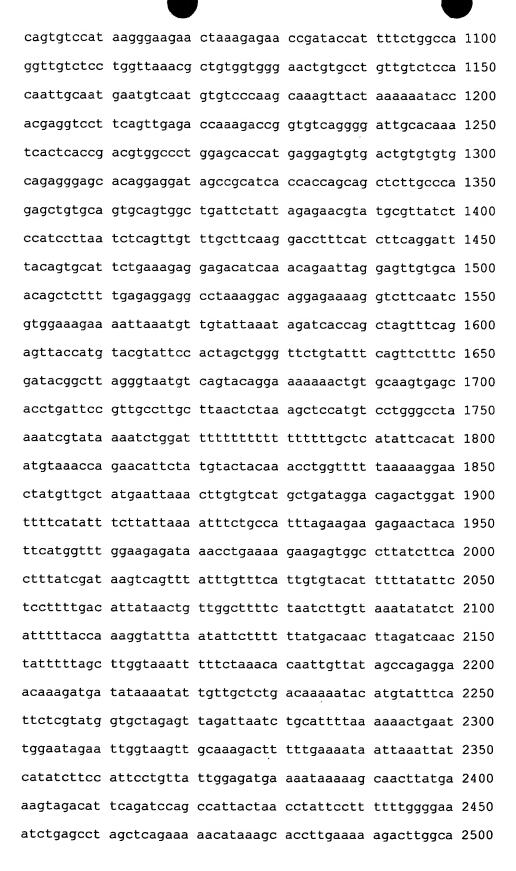
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Pro Arg Phe Pro His Thr Tyr Pro Arg Asn Thr Val Leu Val Trp
65 70 75

Arg Leu Val Ala Val Glu Glu Asn Val Trp Ile Gln Leu Thr Phe 80 85 90

Asp Glu Arg Phe Gly Leu Glu Asp Pro Glu Asp Asp Ile Cys Lys 95 100 105

Tyr Asp Phe Val Glu Val Glu Glu Pro Ser Asp Gly Thr Ile Leu 110 115 120

Gly Arg Trp Cys Gly Ser Gly Thr Val Pro Gly Lys Gln Ile Ser 125 130 135

Lys Gly Asn Gln Ile Arg Ile Arg Phe Val Ser Asp Glu Tyr Phe 140 145 150

Pro Ser Glu Pro Gly Phe Cys Ile His Tyr Asn Ile Val Met Pro 155 160 165

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<212> PRT

<213> Homo sapiens

<400> 496

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His Val Ile Val Asp Cys Thr Asp Lys His Leu Thr Glu Ile Pro

Gly Gly Ile Pro Thr Asn Thr Thr Asn Leu Thr Leu Thr Ile Asn

His Ile Pro Asp Ile Ser Pro Ala Ser Phe His Arg Leu Asp His

Leu Val Glu Ile Asp Phe Arg Cys Asn Cys Val Pro Ile Pro Leu

Gly Ser Lys Asn Asn Met Cys Ile Lys Arg Leu Gln Ile Lys Pro 110 115

Arg Ser Phe Ser Gly Leu Thr Tyr Leu Lys Ser Leu Tyr Leu Asp 130

Gly Asn Gln Leu Leu Glu Ile Pro Gln Gly Leu Pro Pro Ser Leu 140 145

Gln Leu Leu Ser Leu Glu Ala Asn Asn Ile Phe Ser Ile Arg Lys

Glu Asn Leu Thr Glu Leu Ala Asn Ile Glu Ile Leu Tyr Leu Gly 170

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Glu Lys Asp Ala Phe Leu Asn Leu Thr Lys Leu Lys Val Leu Ser 200

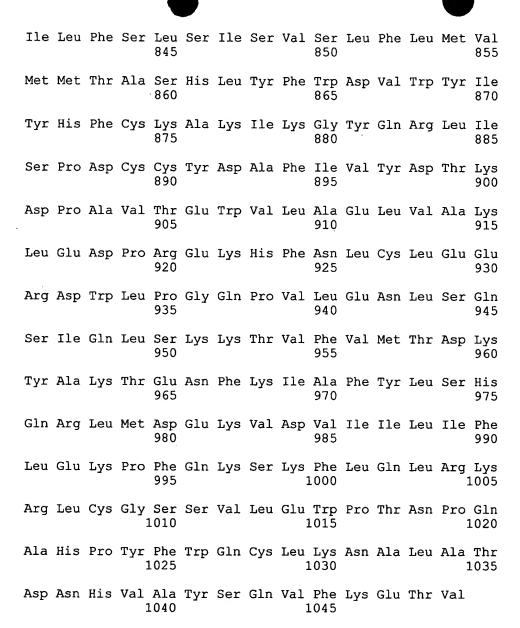
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Thr Leu Thr Glu Leu Tyr Leu Tyr Asn Asn Met Ile Ala Lys Ile

Gln Glu Asp Asp Phe Asn Asn Leu Asn Gln Leu Gln Ile Leu Asp 245 250 255

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Ala	Pro	Cys	Lys	Asn 275	Asn	Ser	Pro	Leu	Gln 280	Ile	Pro	Val	Asn	Ala 285
Phe	Asp	Ala	Leu	Thr 290	Glu	Leu	Lys	Val	Leu 295	Arg	Leu	His	Ser	Asn 300
Ser	Leu	Gln	His	Val 305	Pro	Pro	Arg	Trp	Phe 310	Lys	Asn	Ile	Asn	Lys 315
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Gly	Asp	Ala	Lys	Phe 335	Leu	His	Phe	Leu	Pro 340	Ser	Leu	Ile	Gln	Leu 345
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Asn	Leu	Ser	Gln	Ala 365	Phe	Ser	Ser	Leu	Lys 370	Ser	Leu	Lys	Ile	Leu 375
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Thr	Asn	Phe	Ile	Lys 410	Ile	Ala	Asn	Leu	Ser 415	Met	Phe	Lys	Gln	Phe 420
Lys	Arg	Leu	Lys	Val 425	Ile	Asp	Leu	Ser	Val 430	Asn	Lys	Ile	Ser	Pro 435
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Ser	Val	Glu	Ser	Tyr 455	Glu	Pro	Gln	Val	Leu 460	Glu	Gln	Leu	His	Tyr 465
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Cys	Ser	Arg	Ser	Leu 725	Lys	Asn	Leu	Ile	Leu 730	Lys	Asn	Asn	Gln	Ile 735
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Ser	Phe	Pro	Glu	Asn 770	Val	Leu	Asn	Asn	Leu 775	Lys	Met	Leu	Leu	Leu 780
His	His	Asn	Arg	Phe 785	Leu	Суз	Thr	Cys	Asp 790	Ala	Val	Trp	Phe	Val 795
Trp	Trp	Val	Asn	His 800	Thr	Glu	Val	Thr	Ile 805	Pro	Tyr	Leu	Ala	Thr 810
Asp	Val	Thr	Cys	Val 815	Gly	Pro	Gly	Ala	His 820	Lys	Gly	Gln	Ser	Val 825
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<211> 4199

<212> DNA

<213> Homo sapiens

<400> 497

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<211> 1041

<212> PRT

<213> Homo sapiens

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Ile Ala Glu Cys Ser Asn Arg Arg Leu Gln Glu Val Pro Gln Thr

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Суз	Tyr	Phe	Asn	Lys 185	Val	Cys	Glu	Lys	Thr 190	Asn	Ile	Glu	Asp	Gl <sub>3</sub> 195
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Leu	Lys	Val	Leu	Asn 590	Leu	Ser	His	Asn	Asn 595	Ile	Tyr	Thr	Leu	Thr 600
Asp	Lys	Tyr	Asn	Leu 605	Glu	Ser	Lys	Ser	Leu 610	Val	Glu	Leu	Val	Phe 615
Ser	Gly	Asn	Arg	Leu 620	Asp	Ile	Leu	Trp	Asn 625	Asp	Asp	Asp	Asn	Arg 630
Tyr	Ile	Ser	Ile	Phe	Lys	Gly	Leu	Lys	Asn	Leu	Thr	Arg	Leu	Asp

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Leu	Ser	Leu	Asn	Arg 650	Leu	Lys	His	Ile	Pro 655	Asn	Glu	Ala	Phe	Leu 660
Asn	Leu	Pro	Ala	Ser 665	Leu	Thr	Glu	Leu	His 670	Ile	Asn	Asp	Asn	Met 675
Leu	Lys	Phe	Phe	Asn 680	Trp	Thr	Leu	Leu	Gln 685	Gln	Phe	Pro	Arg	Leu 690
Glu	Leu	Leu	Asp	Leu 695	Arg	Gly	Asn	Lys	Leu 700	Leu	Phe	Leu	Thr	Asp 705
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Ser	Ser	Leu	Lys	His 740	Leu	Asp	Leu	Ser	Ser 745	Asn	Leu	Leu	Lys	Thr 750
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                                     1000
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Ala Val Gly Gly Thr Glu His Ala Tyr Arg Pro Gly Arg Arg Val Cys Ala Val Arg Ala His Gly Asp Pro Val Ser Glu Ser Phe Val Gln Arg Val Tyr Gln Pro Phe Leu Thr Thr Cys Asp Gly His Arg Ala Cys Ser Thr Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg Ser Pro Gly Leu Ala Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro Gly Trp Lys Arg Thr Ser Gly Leu Pro Gly Ala Cys Gly Ala Ala Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly Ser Cys Val Gln Pro Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly Asp Thr Cys Gln 125 130 Ser Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly Cys Pro Gln 145 Arg Cys Ile Asn Thr Ala Gly Ser Tyr Trp Cys Gln Cys Trp Glu 160 Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys Val Pro Lys Gly Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Val Asp Ser Ala Met Lys Glu Glu Val Gln Arg Leu Gln Ser Arg Val Asp Leu Leu Glu Glu Lys Leu Gln Leu Val Leu Ala Pro Leu His Ser Leu Ala Ser Gln Ala Leu Glu His Gly Leu Pro Asp Pro Gly Ser Leu Leu Val His Ser Phe Gln Gln Leu Gly Arg Ile Asp Ser Leu Ser Glu Gln Ile Ser Phe Leu Glu Glu Gln Leu Gly Ser Cys Ser Cys Lys

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Gln Arg Val Tyr Gln Pro Phe Leu Thr Thr Cys Asp Gly His Arg
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Ala Cys Ser Thr Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg 75

Ser Pro Gly Leu Ala Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro 80 85 90

Gly Trp Lys Arg Thr Ser Gly Leu Pro Gly Ala Cys Gly Ala Ala 95 100 105

Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly Ser Cys Val Gln Pro 110 115 120

Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly Asp Thr Cys Gln 125 130 135

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Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Val Asp Ser Ala 185 190 195

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Glu Glu Lys Leu Gln Leu Val Leu Ala Pro Leu His Ser Leu Ala 215 220 225

Ser Gln Ala Leu Glu His Gly Leu Pro Asp Pro Gly Ser Leu Leu 230 235 240

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Gln Arg Val Tyr Gln Pro Phe Leu Thr Thr Cys Asp Gly His Arg
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Ala Cys Ser Thr Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg
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Ser Pro Gly Leu Ala Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro 80 85 90

Gly Trp Lys Arg Thr Ser Gly Leu Pro Gly Ala Cys Gly Ala Ala 95 100 105

Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly Ser Cys Val Gln Pro 110 115 120

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Leu Gly Thr Cys Thr Leu Phe Phe Ala Phe Glu Cys Arg Tyr Leu
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Ala Val Gln Leu Ser Pro Ala Ile Pro Val Phe Ala Ala Met Leu 65 70 75

Phe Leu Phe Ser Met Ala Thr Leu Leu Arg Thr Ser Phe Ser Asp 80 85 90

Pro Gly Val Ile Pro Arg Ala Leu Pro Asp Glu Ala Ala Phe Ile 95 100 105

Glu Met Glu Ile Glu Ala Thr Asn Gly Ala Val Pro Gln Gly Gln
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Arg Pro Pro Pro Arg Ile Lys Asn Phe Gln Ile Asn Asn Gln Ile 125 130 135

Val Lys Leu Lys Tyr Cys Tyr Thr Cys Lys Ile Phe Arg Pro Pro 140 145 150

Arg Ala Ser His Cys Ser Ile Cys Asp Asn Cys Val Glu Arg Phe 155 160 165

Asp His His Cys Pro Trp Val Gly Asn Cys Val Gly Lys Arg Asn 170 175 180

Tyr Arg Tyr Phe Tyr Leu Phe Ile Leu Ser Leu Ser Leu Leu Thr 185 190 195

Ile Tyr Val Phe Ala Phe Asn Ile Val Tyr Val Ala Leu Lys Ser 200 205 210

Leu Lys Ile Gly Phe Leu Glu Thr Leu Lys Glu Thr Pro Gly Thr 215 220 225

Val Leu Glu Val Leu Ile Cys Phe Phe Thr Leu Trp Ser Val Val

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Thr Val Arg Gln Gly Glu Ser Ala Thr Leu Arg Cys Thr Ile Asp
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Asn Arg Val Thr Arg Val Ala Trp Leu Asn Arg Ser Thr Ile Leu 65 70 75

Tyr Ala Gly Asn Asp Lys Trp Cys Leu Asp Pro Arg Val Val Leu 80 85 90

Leu Ser Asn Thr Gln Thr Gln Tyr Ser Ile Glu Ile Gln Asn Val 95 100 105

Asp Val Tyr Asp Glu Gly Pro Tyr Thr Cys Ser Val Gln Thr Asp

Asn His Pro Lys Thr Ser Arg Val His Leu Ile Val Gln Val Ser 125 130 135

Pro Lys Ile Val Glu Ile Ser Ser Asp Ile Ser Ile Asn Glu Gly
140 145 150

Asn Asn Ile Ser Leu Thr Cys Ile Ala Thr Gly Arg Pro Glu Pro 155 160 165

Thr Val Thr Trp Arg His Ile Ser Pro Lys Ala Val Gly Phe Val 170 175 180

Ser Glu Asp Glu Tyr Leu Glu Ile Gln Gly Ile Thr Arg Glu Gln 185 190 195

Ser Gly Asp Tyr Glu Cys Ser Ala Ser Asn Asp Val Ala Ala Pro 200 205 210

Val Val Arg Arg Val Lys Val Thr Val Asn Tyr Pro Pro Tyr Ile 215 220 225

Ser Glu Ala Lys Gly Thr Gly Val Pro Val Gly Gln Lys Gly Thr

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Ser Glu H	is Asp	Tyr 290	Gly	Asn	Tyr	Thr	Cys 295	Val	Ala	Ser	Asn	Lys 300
Leu Gly H	is Thr	Asn 305	Ala	Ser	Ile	Met	Leu 310	Phe	Gly	Pro	Gly	Ala 315
Val Ser G	lu Val	Ser 320	Asn	Gly	Thr	Ser	Arg 325	Arg	Ala	Gly	Суз	Val 330
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Ile	Trp	Asn	Leu	Val 365	Gln	Lys	Thr	Thr	Ser 370	Ser	Leu	Asp	Arg	Arg 375
Phe	Glu	Ser	Ala	Gln 380	Glu	Lys	Leu	Leu	Glu 385	Thr	Leu	Tyr	Gly	Thr 390
Lys	Lys	Ser	Cys	Val 395	Pro	Arg	Trp	Gln	Thr 400	Суз	Ile	Ser	Asn	Thr 405
Asp	Asp	Ala	Leu	Gly 410	Phe	Ala	Leu	Gly	Ser 415	Leu	Phe	Val	Lys	Ala 420
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Phe	Phe	Gln	Asn	Met 500	Leu	Asn	Leu	Tyr	Asn 505	Phe	Ser	Ala	Lys	Val 510
Met	Ala	Asp	Gln	Leu 515	Arg	Lys	Pro	Pro	Ser 520	Arg	Asp	Gln	Trp	Ser 525
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Met	Gly	His	Glu	Leu 575	Thr	His	Ala	Phe	Asp 580	Asp	Gln	Gly	Arg	Glu 585
Tyr	Asp	Lys	Glu	Gly 590	Asn	Leu	Arg	Pro	Trp 595	Trp	Gln	Asn	Glu	Ser 600
Leu	Ala	Ala	Phe	Arg 605	Asn	His	Thr	Ala	Cys 610	Met	Glu	Glu	Gln	Tyr 615

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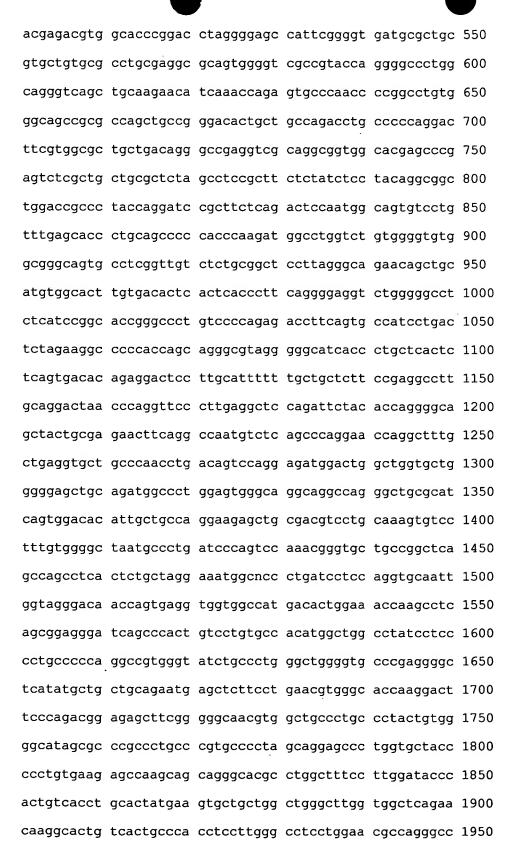
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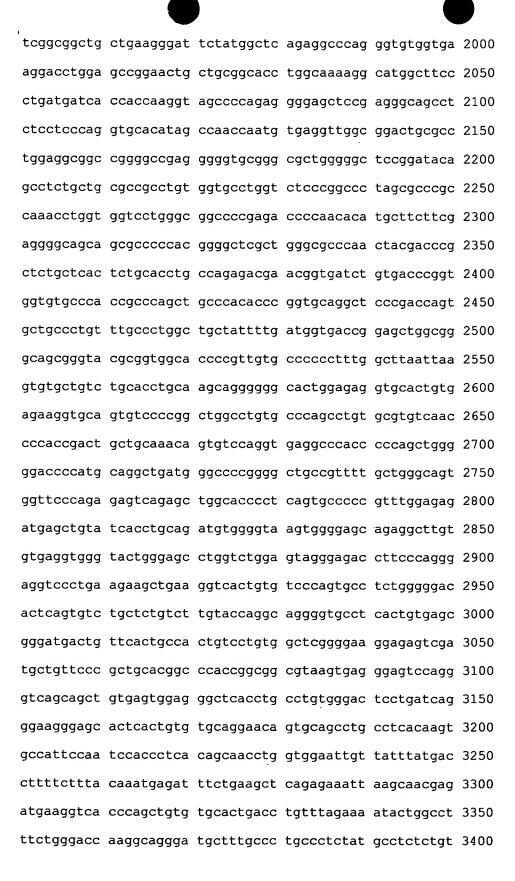
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<212> PRT

<213> Homo Sapien

<400> 612

Met Met Leu Leu Val Gln Gly Ala Cys Cys Ser Asn Gln Trp Leu

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Ala Ala Val Leu Leu Ser Leu Cys Cys Leu Leu Pro Ser Cys Leu
20 25 30

Pro Ala Gly Gln Ser Val Asp Phe Pro Trp Ala Ala Val Asp Asn 35 40 45

Met Met Val Arg Lys Gly Asp Thr Ala Val Leu Arg Cys Tyr Leu
50 55 60

Glu Asp Gly Ala Ser Lys Gly Ala Trp Leu Asn Arg Ser Ser Ile 65 70 75

Ile Phe Ala Gly Gly Asp Lys Trp Ser Val Asp Pro Arg Val Ser 80 85 90

Ile Ser Thr Leu Asn Lys Arg Asp Tyr Ser Leu Gln Ile Gln Asn 95 100 105

Val Asp Val Thr Asp Asp Gly Pro Tyr Thr Cys Ser Val Gln Thr 110 115 120

Gln His Thr Pro Arg Thr Met Gln Val His Leu Thr Val Gln Val 125 130 135

Pro Pro Lys Ile Tyr Asp Ile Ser Asn Asp Met Thr Val Asn Glu 140 145 150

Gly Thr Asn Val Thr Leu Thr Cys Leu Ala Thr Gly Lys Pro Glu 155 160 165

Pro Ser Ile Ser Trp Arg His Ile Ser Pro Ser Ala Lys Pro Phe 170 175 180

Glu Asn Gly Gln Tyr Leu Asp Ile Tyr Gly Ile Thr Arg Asp Gln
185 190 195

Ala Gly Glu Tyr Glu Cys Ser Ala Glu Asn Ala Val Ser Phe Pro 200 205 210

Asp Val Arg Lys Val Lys Val Val Val Asn Phe Ala Pro Thr Ile 215 220 225

Gln Glu Ile Lys Ser Gly Thr Val Thr Pro Gly Arg Ser Gly Leu

	230			235			240				
Ile Arg Cy	s Glu Gly 245	Ala Gly	Val Pro	Pro Pro 250	Ala Phe	Glu	Trp 255				
Tyr Lys Gl	y Glu Lys 260	Lys Leu	Phe Asn	Gly Gln 265	Gln Gly	Ile	Ile 270				
Ile Gln As	n Phe Ser 275	Thr Arg	Ser Ile	Leu Thr 280	Val Thr	Asn	Val 285				
Thr Gln Gl	u His Phe 290	Gly Asn	Tyr Thr	Cys Val 295	Ala Ala	Asn	Lys 300				
Leu Gly Th	r Thr Asn 305	Ala Ser	Leu Pro	Leu Asn 310	Pro Pro	Ser	Thr 315				
Ala Gln Ty	r Gly Ile 320	Thr Gly	Ser Ala	Asp Val 325	Leu Phe	Ser	Cys 330				
Trp Tyr Le	u Val Leu 335	Thr Leu	Ser Ser	Phe Thr 340	Ser Ile	Phe	Tyr 345				
Leu Lys As	n Ala Ile 350	Leu Gln									
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ctgcttttca	ccaaattgc	a atggaç	geett te	gaaatcaa	tgttccaa	ag 2	200				
cccaagagga	gaaatgggg	t gaactt	ctcc ct	agctgtgg	tggtcatc	ta 2	250				
cctgatcctg	ctcaccgct	g gcgctg	ggct gc	tggtggtc	caagttct	ga 3	300				
atctgcaggc	gcggctccg	g gtcctg	ggaga tg	tatttcct	caatgaca	ct 3	350				
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tggagaacac	ctggctcag	g gtgcat	cgag gc	tgcaagtc	ctgcaggc	cc 4	150				
aactcacctg											
aacttcactc	agaacccag	g gatgtt	caga at	caaaggtg	aacaaggc	gc 5	50				

cccaggtctt caaggtcaca agggggccat gggcatgcct ggtgcccctg 600

gcccgccggg accacctgct gagaagggag ccaagggggc tatgggacga 650

gatggagcaa caggcccctc gggaccccaa ggcccaccgg gagtcaaggg 700 agaggeggge etecaaggae eecagggtge tecagggaag caaggageea 750 ctggcacccc aggaccccaa ggagagaagg gcagcaaagg cgatgggggt 800 ctcattggcc caaaagggga aactggaact aagggagaga aaggagacct 850 gggtctccca ggaagcaaag gggacagggg catgaaagga gatgcagggg 900 tcatggggcc tcctggagcc caggggagta aaggtgactt cgggaggcca 950 ggcccaccag gtttggctgg ttttcctgga gctaaaqqaq atcaaqqaca 1000 acctggactg cagggtgttc cgggccctcc tggtgcagtg ggacacccag 1050 gtgccaaggg tgagcctggc agtgctggct cccctgggcg agcaggactt 1100 ccagggagcc ccgggagtcc aggagccaca ggcctgaaag gaagcaaagg 1150 ggacacagga cttcaaggac agcaaggaag aaaaggagaa tcaggagttc 1200 caggccctgc aggtgtgaag ggagaacagg ggagcccagg gctggcaggt 1250 cccaagggag cccctggaca agctggccag aagggagacc agggagtgaa 1300 aggatettet ggggageaag gagtaaaggg agaaaaaggt gaaagaggtg 1350 aaaactcagt gtccgtcagg attgtcggca gtagtaaccg aggccgggct 1400 gaagtttact acagtggtac ctgggggaca atttqcqatq acqagtggca 1450 aaattotgat gocattgtot totgoogoat gotgggttac tocaaaggaa 1500 gggccctgta caaagtggga gctggcactg ggcagatctg gctggataat 1550 gttcagtgtc ggggcacgga gagtaccctg tggagctgca ccaagaatag 1600 ctggggccat catgactgca gccacgagga ggacgcaggc gtggagtgca 1650 gcgtctgacc cggaaaccct ttcacttctc tgctcccgag gtgtcctcgg 1700 gctcatatgt gggaaggcag aggatctctg aggagttccc tqqqqacaac 1750 tgagcagcct ctggagaggg gccattaata aagctcaaca tcattga 1797

<210> 614

<211> 520

<212> PRT

<213> Homo Sapien

<400> 614

Met Arg Asn Lys Lys Ile Leu Lys Glu Asp Glu Leu Leu Ser Glu
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Thr Gln Gln Ala Ala Phe His Gln Ile Ala Met Glu Pro Phe Glu 20 25 30

Ile Asn Val Pro Lys Pro Lys Arg Arg Asn Gly Val Asn Phe Ser Leu Ala Val Val Ile Tyr Leu Ile Leu Leu Thr Ala Gly Ala Gly Leu Leu Val Val Gln Val Leu Asn Leu Gln Ala Arg Leu Arg Val Leu Glu Met Tyr Phe Leu Asn Asp Thr Leu Ala Ala Glu Asp 80 Ser Pro Ser Phe Ser Leu Leu Gln Ser Ala His Pro Gly Glu His Leu Ala Gln Gly Ala Ser Arg Leu Gln Val Leu Gln Ala Gln Leu 115 Thr Trp Val Arg Val Ser His Glu His Leu Leu Gln Arg Val Asp 130 Asn Phe Thr Gln Asn Pro Gly Met Phe Arg Ile Lys Gly Glu Gln Gly Ala Pro Gly Leu Gln Gly His Lys Gly Ala Met Gly Met Pro Gly Ala Pro Gly Pro Pro Gly Pro Pro Ala Glu Lys Gly Ala Lys Gly Ala Met Gly Arg Asp Gly Ala Thr Gly Pro Ser Gly Pro Gln Gly Pro Pro Gly Val Lys Gly Glu Ala Gly Leu Gln Gly Pro Gln Gly Ala Pro Gly Lys Gln Gly Ala Thr Gly Thr Pro Gly Pro Gln Gly Glu Lys Gly Ser Lys Gly Asp Gly Gly Leu Ile Gly Pro Lys Gly Glu Thr Gly Thr Lys Gly Glu Lys Gly Asp Leu Gly Leu Pro 255 Gly Ser Lys Gly Asp Arg Gly Met Lys Gly Asp Ala Gly Val Met Gly Pro Pro Gly Ala Gln Gly Ser Lys Gly Asp Phe Gly Arg Pro Gly Pro Pro Gly Leu Ala Gly Phe Pro Gly Ala Lys Gly Asp Gln Gly Gln Pro Gly Leu Gln Gly Val Pro Gly Pro Pro Gly Ala Val 305 315 Gly His Pro Gly Ala Lys Gly Glu Pro Gly Ser Ala Gly Ser Pro

				320					325					330
Gly	Arg	Ala	Gly	Leu 335	Pro	Gly	Ser	Pro	Gly 340	Ser	Pro	Gly	Ala	Thr 345
Gly	Leu	Lys	Gly	Ser 350	Lys	Gly	Asp	Thr	Gly 355	Leu	Gln	Gly	Gln	Gln 360
Gly	Arg	Lys	Gly	Glu 365	Ser	Gly	Val	Pro	Gly 370	Pro	Ala	Gly	Val	Lys 375
Gly	Glu	Gln	Gly	Ser 380	Pro	Gly	Leu	Ala	Gly 385	Pro	Lys	Gly	Ala	Pro 390
Gly	Gln	Ala	Gly	Gln 395	Lys	Gly	Asp	GÌn	Gly 400	Val	Lys	Gly	Ser	Ser 405
Gly	Glu	Gln	Gly	Val 410	Lys	Gly	Glu	Lys	Gly 415	Glu	Arg	Gly	Glu	Asn 420
Ser	Val	Ser	Val	Arg 425	Ile	Val	Gly	Ser	Ser 430	Asn	Arg	Gly	Arg	Ala 435
Glu	Val	Tyr	Tyr	Ser 440	Gly	Thr	Trp	Gly	Thr 445	Ile	Cys	Asp	Asp	Glu 450
Trp	Gln	Asn	Ser	Asp 455	Ala	Ile	Val	Phe	Cys 460	Arg	Met	Leu	Gly	Tyr 465
Ser	Lys	Gly	Arg	Ala 470	Leu	Tyr	Lys	Val	Gly 475	Ala	Gly	Thr	Gly	Gln 480
Ile	Trp	Leu	Asp	Asn 485	Val	Gln	Суз	Arg	Gly 490	Thr	Glu	Ser	Thr	Leu 495
Trp	Ser	Суз	Thr	Lys 500	Asn	Ser	Trp	Gly	His 505	His	Asp	Cys	Ser	His 510
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<211> 647 <212> DNA <213> Homo Sapien

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<210> 616

<211> 98

<212> PRT

<213> Homo Sapien

<400> 616

Met Lys Leu Met Val Leu Val Phe Thr Ile Gly Leu Thr Leu Leu 1 5 10 15

Leu Gly Val Gln Ala Met Pro Ala Asn Arg Leu Ser Cys Tyr Arg
20 25 30

Lys Ile Leu Lys Asp His Asn Cys His Asn Leu Pro Glu Gly Val
35 40 45

Ala Asp Leu Thr Gln Ile Asp Val Asn Val Gln Asp His Phe Trp
50 55 60

Asp Gly Lys Gly Cys Glu Met Ile Cys Tyr Cys Asn Phe Ser Glu
65 70 75

Leu Leu Cys Cys Pro Lys Asp Val Phe Phe Gly Pro Lys Ile Ser 80 85 90

Phe Val Ile Pro Cys Asn Asn Gln

<210> 617

<211> 2558

<212> DNA

<213> Homo Sapien

<400> 617

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<210> 618

<211> 750

<212> PRT

<213> Homo Sapien

<400> 618

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Arg Arg Pro Arg Trp Leu Cys Ala Gly Ala Leu Val Leu Ala Gly 20 25 30

Gly Phe Phe Leu Leu Gly Phe Leu Phe Gly Trp Phe Ile Lys Ser 35 40 45

Ser Asn Glu Ala Thr Asn Ile Thr Pro Lys His Asn Met Lys Ala 50 55 60

Phe Leu Asp Glu Leu Lys Ala Glu Asn Ile Lys Lys Phe Leu His
65 70 75

Asn Phe Thr Gln Ile Pro His Leu Ala Gly Thr Glu Gln Asn Phe 80 85 90

Gln	Leu	Ala	Lys	Gln 95	Ile	Gln	Ser	Gln	Trp 100	Lys	Glu	Phe	Gly	Leu 105
Asp	Ser	Val	Glu	Leu 110	Ala	His	Tyr	Asp	Val 115	Leu	Leu	Ser	Tyr	Pro 120
Asn	Lys	Thr	His	Pro 125	Asn	Tyr	Ile	Ser	Ile 130	Ile	Asn	Glu	Asp	Gly 135
Asn	Glu	Ile	Phe	Asn 140	Thr	Ser	Leu	Phe	Glu 145	Pro	Pro	Pro	Pro	Gly 150
Tyr	Glu	Asn	Val	Ser 155	Asp	Ile	Val	Pro	Pro 160	Phe	Ser	Ala	Phe	Ser 165
Pro	Gln	Gly	Met	Pro 170	Glu	Gly	Asp	Leu	Val 175	Tyr	Val	Asn	Tyr	Ala 180
Arg	Thr	Glu	Asp	Phe 185	Phe	Lys	Leu	Glu	Arg 190	Asp	Met	Lys	Ile	Asn 195
Cys	Ser	Gly	Lys	Ile 200	Val	Ile	Ala	Arg	Tyr 205	Gly	Lys	Val	Phe	Arg 210
Gly	Asn	Lys	Val	Lys 215	Asn	Ala	Gln	Leu	Ala 220	Gly	Ala	Lys	Gly	Val 225
Ile	Leu	Tyr	Ser	Asp 230	Pro	Ala	Asp	Tyr	Phe 235	Ala	Pro	Gly	Val	Lys 240
Ser	Tyr	Pro	Asp	Gly 245	Trp	Asn	Leu	Pro	Gly 250	Gly	Gly	Val	Gln	Arg 255
Gly	Asn	Ile	Leu	Asn 260	Leu	Asn	Gly	Ala	Gly 265	Asp	Pro	Leu	Thr	Pro 270
Gly	Tyr	Pro	Ala	Asn 275	Glu	Tyr	Ala	Tyr	Arg 280	Arg	Gly	Ile	Ala	Glu 285
Ala	Val	Gly	Leu	Pro 290	Ser	Ile	Pro	Val	His 295	Pro	Ile	Gly	Tyr	Tyr 300
Asp	Ala	Gln	Lys	Leu 305	Leu	Glu	Lys	Met	Gly 310	Gly	Ser	Ala	Pro	Pro 315
Asp	Ser	Ser	Trp	Arg 320	Gly	Ser	Leu	Lys	Val 325	Pro	Tyr	Asn	Val	Gly 330
Pro	Gly	Phe	Thr	Gly 335	Asn	Phe	Ser	Thr	Gln 340	Lys	Val	Lys	Met	His 345
Ile	His	Ser	Thr	Asn 350	Glu	Val	Thr	Arg	Ile 355	Tyr	Asn	Val	Ile	Gly 360
Thr	Leu	Arg	Gly	Ala 365	Val	Glu	Pro	Asp	Arg 370	Tyr	Val	Ile	Leu	Gly 375
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Gly	Ala	Ala	Val	Val 395	His	Glu	Ile	Val	Arg 400	Ser	Phe	Gly	Thr	Leu 405
Lys	Lys	Glu	Gly	Trp 410	Arg	Pro	Arg	Arg	Thr 415	Ile	Leu	Phe	Ala	Ser 420
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Glu	Glu	Asn	Ser	Arg 440	Leu	Leu	Gln	Glu	Arg 445	Gly	Val	Ala	Tyr	Ile 450
Asn	Ala	Asp	Ser	Ser 455	Ile	Glu	Gly	Asn	Tyr 460	Thr	Leu	Arg	Val	Asp 465
Cys	Thr	Pro	Leu	Met 470	Tyr	Ser	Leu	Val	His 475	Asn	Leu	Thr	Lys	Glu 480
Leu	Lys	Ser	Pro	Asp 485	Glu	Gly	Phe	Glu	Gly 490	Lys	Ser	Leu	Tyr	Glu 495
Ser	Trp	Thr	Lys	Lys 500	Ser	Pro	Ser	Pro	Glu 505	Phe	Ser	Gly	Met	Pro 510
Arg	Ile	Ser	Lys	Leu 515	Gly	Ser	Gly	Asn	Asp 520	Phe	Glu	Val	Phe	Phe 525
Gln	Arg	Leu	Gly	Ile 530	Ala	Ser	Gly	Arg	Ala 535	Arg	Tyr	Thr	Lys	Asn 540
Trp	Glu	Thr	Asn	Lys 545	Phe	Ser	Gly	Tyr	Pro 550	Leu	Tyr	His	Ser	Val 555
Tyr	Glu	Thr	Tyr	Glu 560	Leu	Val	Glu	Lys	Phe 565	Tyr	Asp	Pro	Met	Phe 570
Lys	Tyr	His	Leu	Thr 575	Val	Ala	Gln	Val	Arg 580	Gly	Gly	Met	Val	Phe 585
Glu	Leu	Ala	Asn	Ser 590	Ile	Val	Leu	Pro	Phe 595	Asp	Суз	Arg	Asp	Tyr 600
Ala	Val	Val	Leu	Arg 605	Lys	Tyr	Ala	Asp	Lys 610	Ile	Tyr	Ser	Ile	Ser 615
Met	Lys	His	Pro	Gln 620	Glu <sub>.</sub>	Met	Lys	Thr	Tyr- 625	Ser	Val	Ser	Phe	Asp 630
Ser	Leu	Phe	Ser	Ala 635	Val	Lys	Asn	Phe	Thr 640	Glu	Ile	Ala	Ser	Lys 645
Phe	Ser	Glu	Arg	Leu 650	Gln	Asp	Phe	Asp	Lys 655	Ser	Asn	Pro	Ile	Val 660
Leu	Arg	Met	Met	Asn 665	Asp	Gln	Leu	Met	Phe 670	Leu	Glu	Arg	Ala	Phe 675

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Ile Asp Pro Leu Gly Leu Pro Asp Arg Pro Phe Tyr Arg His Val
 Ile Tyr Ala Pro Ser Ser His Asn Lys Tyr Ala Gly Glu Ser Phe
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                                      700
 Pro Gly Ile Tyr Asp Ala Leu Phe Asp Ile Glu Ser Lys Val Asp
 Pro Ser Lys Ala Trp Gly Glu Val Lys Arg Gln Ile Tyr Val Ala
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 Ala Phe Thr Val Gln Ala Ala Glu Thr Leu Ser Glu Val Ala
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